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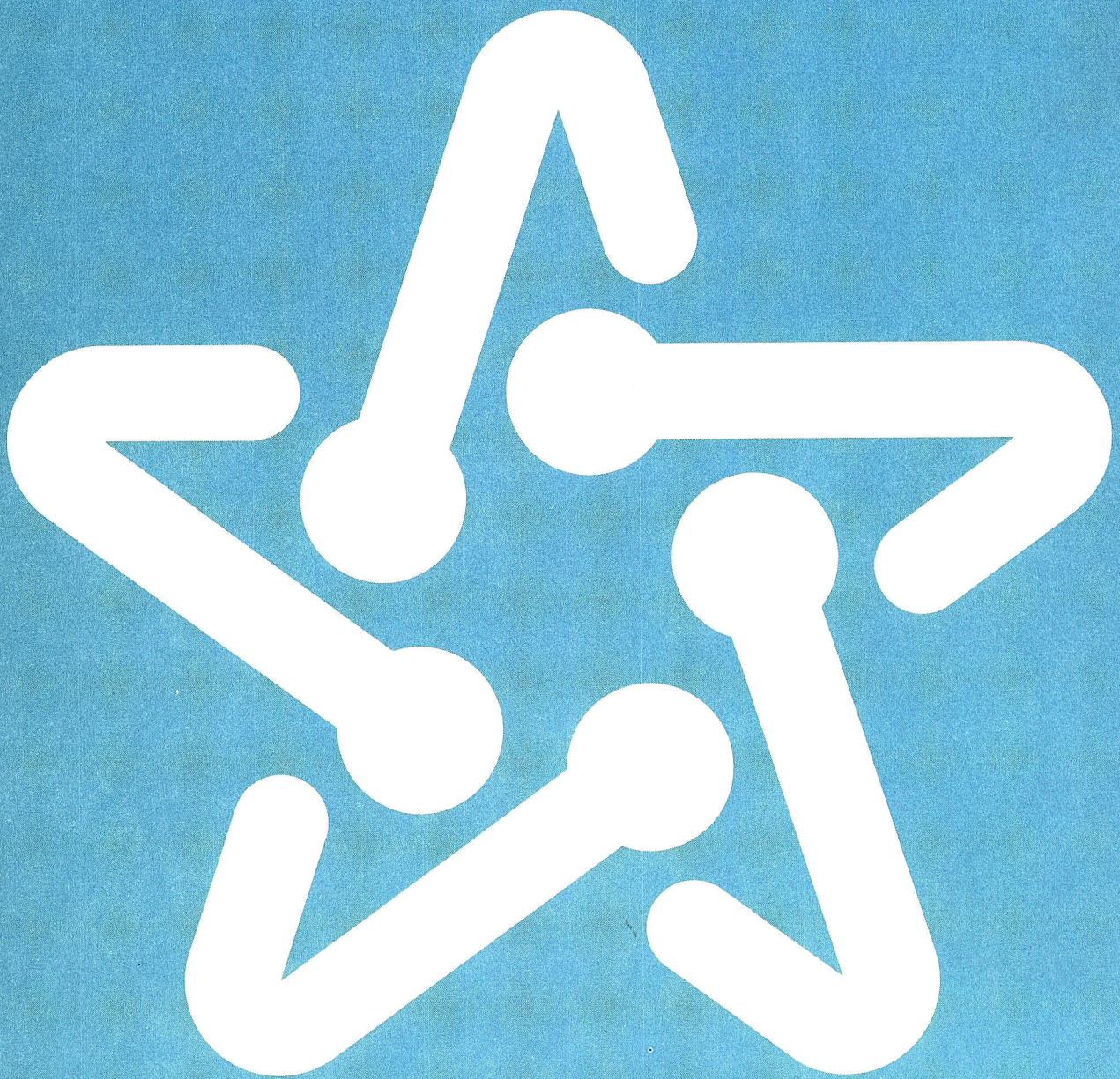
May 1977

Monthly Energy Review



Office of Energy Information and Analysis,
Federal Energy Administration

National Energy
Information Center

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Feature articles appearing in previous issues:

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Part 1

Overview

Domestic energy production during March 1977 averaged 170 trillion Btu per day (the equivalent of 29.3 million barrels per day of crude oil), an increase of 5.3 percent from the previous month's rate, and the highest monthly level since March 1973. Most of the increase was due to a 27.6-percent rise in average daily coal production as mining operations returned to normal after a 2-month slowdown caused by the extreme cold weather. March's coal output level of 65 million tons was a record for the 1970's, and it surpassed crude oil production (on a Btu basis) for the first time in recent years. In spite of the large March output, average domestic energy production for the first 3 months of the year remained 2.4 percent below the January-March period of 1976 and 3.6 percent below production for the corresponding months in 1975.

Imports of fossil fuels were very high again in March, averaging 56 trillion Btu per day (or 9.7 million barrels per day of crude oil equivalent), down 4 percent from February's record, but up 34 percent compared with March 1976 imports. The 3-month import average was also 34 percent greater than the average for the same period in 1976, with crude oil imports registering the largest increase at 39 percent. A 26-percent growth was reported for refined product imports, and natural gas imports were 13 percent greater.

These high import levels were necessary to replenish fuel stocks which were heavily drawn upon during the early- and mid-winter months. By the end of March, stocks of most fuels had been built up to levels that exceeded year-ago levels. Crude oil and distillate fuel oil inventories were about 1 percent above a year ago, and residual fuel oil stocks were 6 percent higher. In particular, motor gasoline stocks achieved an all-time high of 259 million barrels at the end of March, an increase of 8 percent compared with March 1976 stocks. The natural gas supply situation also improved markedly during the month. Underground storage injections were twice as high as in March 1976, bringing the total amount of working gas* in storage reservoirs to a level only 8.5 percent below last March.

*Gas available for withdrawal.

Domestic energy consumption in February averaged 228 trillion Btu per day (the equivalent of 39 million barrels per day of crude oil), a drop of 8.4 percent from January's record-breaking peak, but an increase of 7.9 percent compared with last February's average. By far the largest portion of energy consumed was in the form of petroleum products, accounting for 47 percent of the total. Natural gas was second with 27 percent, followed by coal at 19 percent. Hydroelectric and nuclear electric power each contributed about half of the remaining 7 percent of the total. These proportions have changed somewhat over the 2-year period since February 1975 when approximately 43 percent of the energy consumed was petroleum products, 33 percent was natural gas, and 17 percent was coal. The total share of hydroelectric and nuclear power was unchanged at 7 percent.

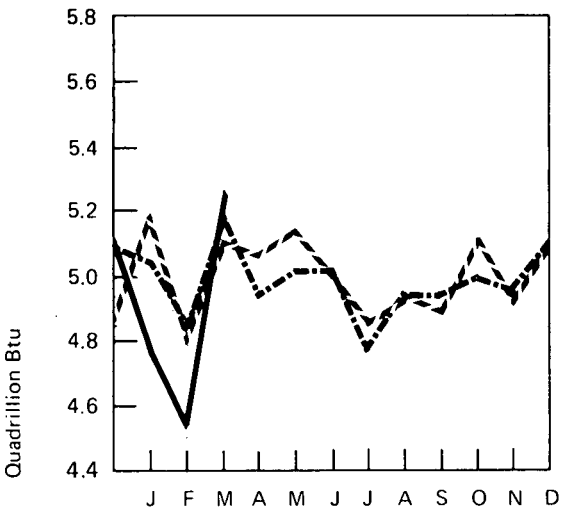
Following a 7.4-percent growth rate in the first 2 months of the year, March electric power generation was only 3.1 percent above the March 1976 production level, reflecting a return to comparatively warmer weather. (Heating degree-days in March were 19 percent below normal and 1 percent below the March 1976 count.)

The warm weather that prevailed in March continued through April, resulting in an accumulation of 23 percent fewer than normal distillate oil degree-days and 9 percent fewer than for last April. The cumulative degree-day total for the entire season (July 1, 1976, through May 1, 1977), however, was 10 percent above normal and 22 percent above the 1975-76 season.

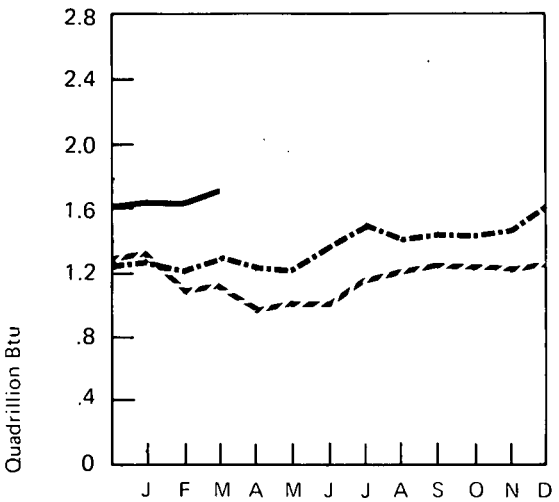
Retail gasoline prices advanced for the second consecutive month during March, with increases ranging from 0.4 cent per gallon for unleaded gasoline to 0.7 cent for premium. Retail prices for all grades of gasoline are currently running about 8.5 percent above year ago levels.

OPEC crude oil production rose over 3 million barrels per day in February to 32.0 million barrels per day, recouping part of January's loss associated with bad weather and the two-tier price increase. Worldwide crude oil output averaged 59.3 million barrels per day, up 9.0 percent from the average for February 1976.

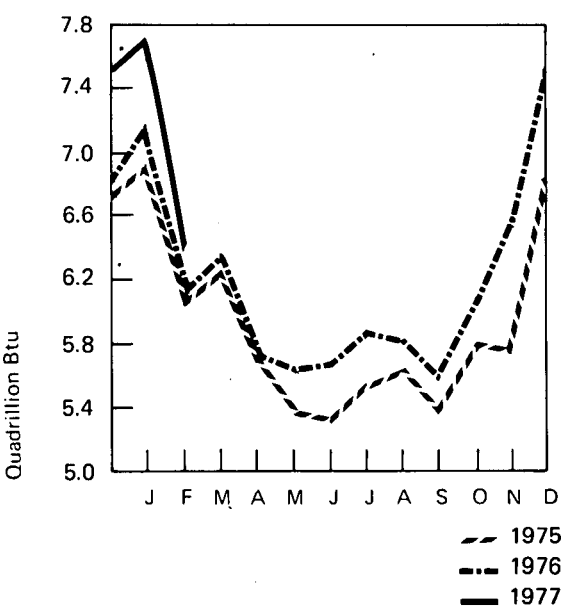
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



		Domestic Production of Energy*	Imports of Fossil Fuels**	Domestic Consumption of Energy***
			Quadrillion (10^{15}) Btu	
1972	**TOTAL**	**62.937**	**11.563**	**71.895**
1973	**TOTAL**	**62.373**	**14.519**	**74.551**
1974	**TOTAL**	**61.138**	**14.114**	**72.601**
1975	January	5.199	1.334	6.927
	February	4.793	1.093	6.054
	March	5.118	1.128	6.267
	April	5.060	0.971	5.685
	May	5.148	1.030	5.368
	June	4.999	1.027	5.315
	July	4.849	1.164	5.550
	August	4.942	1.220	5.634
	September	4.896	1.272	5.388
	October	5.118	1.232	5.801
	November	4.918	1.210	5.747
	December	5.095	1.255	6.821
	TOTAL	**60.134**	**13.935**	**70.557**
1976	January	5.056	1.296	7.183
	February	4.834	1.210	6.133
	March	5.194	1.301	6.360
	April	4.937	1.245	R5.716
	May	5.034	1.232	R5.658
	June	5.035	1.391	R5.687
	July	4.777	1.507	R5.860
	August	4.952	1.416	R5.838
	September	4.949	1.465	R5.594
	October	5.003	1.448	6.096
	November	4.948	1.498	R6.587
	December	R5.112	R1.610	R7.502
	TOTAL	**R59.830**	**R16.619**	**R74.214**
1977	January	R4.762	R1.651	R††7.723
	February	R†4.524	R†1.636	††6.391
	March	†5.273	†1.739	NA
	TOTAL	**14.560** (3 months)	**5.026** (3 months)	**14.114** (2 months)

*See Explanatory Note 1.
**See Explanatory Note 2.
***See Explanatory Note 3.
†Preliminary data.
††Partially estimated.
R=Revised data.
NA=Not available.
Source: FEA.

Part 2 Crude Oil and Refined Petroleum Products

Crude Oil and Refined Petroleum Products

Domestic production of crude oil in March was estimated at 8.1 million barrels per day, 1.5 percent above the level for the previous month, but 1.3 percent below March 1976 production.

Imports of crude oil and petroleum products continued at a high level of 9.0 million barrels per day in March. This was 23.4 percent above FEA's forecast for the month (which assumed normal weather) and 34.9 percent higher than last March's level. About 1.2 million barrels per day of these imports were used to rebuild stocks which had been depleted as the result of abnormally cold weather earlier in the season.

Total domestic demand for petroleum products in March averaged 17.9 million barrels per day, 12.9 percent below the winter peak of 20.5 million barrels per day which occurred last December. March demand was 3.2 percent higher than in the same month in 1976.

Demand for motor gasoline during March was 6.8 million barrels per day, 0.8 percent above the FEA forecast for the month, but 1.8 percent below the level for March 1976. Motor gasoline stocks reached an alltime high of 259 million barrels at the end of March, mainly due to stockpiling in anticipation of the summer peak driving season.

Distillate fuel oil demand in March was 3.5 million barrels per day, 1.5 percent below the forecast but 4.6 percent above demand in March 1976. Stocks of distillate oil, which had been unusually low at the end of January and February 1977, were replenished during March as a result of larger than usual importing activity.

Residual fuel oil demand in March was 3.2 million barrels per day, 13.9 percent above the FEA forecast and 14.9 percent above the demand level for last March. Much of the demand increase resulted from the improvement in the economy, reflected in the Federal Reserve Board's index of industrial production which was 5.5 percent above the March 1976 index. As noted in the "Definitions," however, "demand" is a calculated value, representing the "total disappearance of refined products from primary supplies." Secondary and consumer stocks of residual fuel oil, held by industry and the electric utilities, are substantial, and some of this large apparent demand may represent rebuilding of such secondary stocks.

Distillate Oil Heating Degree-Days

The warmer than normal weather that began the last week of February continued through March and April. National average distillate oil weighted heating degree-days for the period March 28 through May 1 were 23 percent below normal. Degree-days in New England were 20 percent below normal, in the Middle Atlantic States, 19 percent below normal, and in the Lower Atlantic States, 31 percent below normal. The Midwest also accumulated 31 percent fewer degree-days than normal, and the South Central States, 37 percent fewer. Temperatures in the Mountain and West Coast States were also relatively mild, with degree-days 12 percent and 18 percent below normal, respectively.

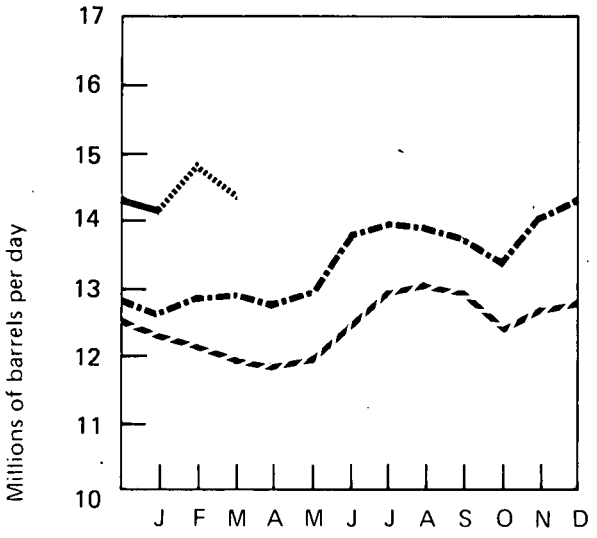
Despite the warm weather during March and April, cumulative national average distillate oil heating degree-days for the entire season (July 1, 1976, through May 1, 1977) were 10 percent above normal and 22 percent above the 1975-76 heating season. East of the Mississippi, the winter of 1976-77 was the coldest in this century. Considering the whole area east of the continental divide, it was the second coldest of the century. (The winter of 1917-18 was the coldest.)

Crude Oil

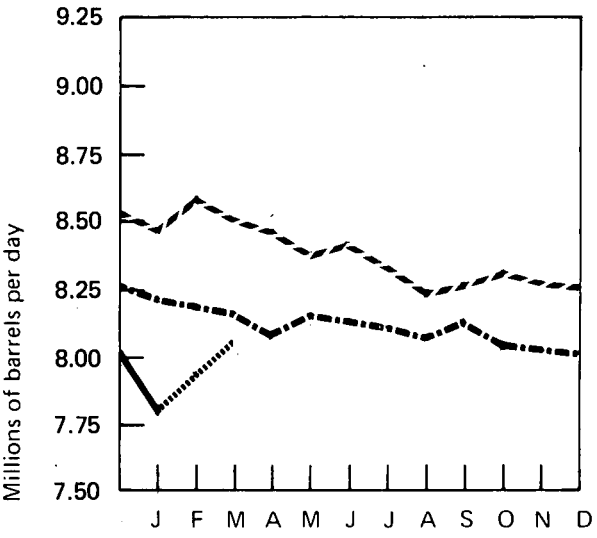
		Crude Input to Refineries	Domestic Production*	Imports*	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	**AVERAGE**	**11,696**	**9,441**	**2,216**	****246,395**
1973	**AVERAGE**	**12,431**	**9,208**	**3,244**	****242,478**
1974	**AVERAGE**	**12,133**	**8,774**	**3,477**	****265,020**
1975	January	12,297	8,455	4,029	260,462
	February	12,135	8,591	3,828	276,755
	March	11,905	8,493	3,656	279,989
	April	11,803	8,457	3,378	281,908
	May	11,983	8,379	3,486	280,961
	June	12,417	8,421	3,905	276,132
	July	12,915	8,336	4,192	264,157
	August	13,046	8,249	4,581	256,616
	September	12,945	8,280	4,689	259,446
	October	12,365	8,324	4,389	269,584
	November	12,689	8,278	4,623	270,950
	December	12,779	8,254	4,476	271,354
	AVERAGE	**12,442**	**8,375**	**4,105**	
1976	January	12,560	8,211	4,595	289,296
	February	12,834	8,196	4,208	277,414
	March	12,877	8,175	4,738	283,112
	April	12,727	8,080	4,790	286,628
	May	12,920	8,168	4,669	283,982
	June	13,799	8,144	5,621	281,715
	July	13,901	8,104	5,792	282,599
	August	13,888	8,074	5,556	277,272
	September	13,716	8,185	5,875	284,357
	October	13,319	8,049	5,699	297,683
	November	14,101	8,043	5,946	298,836
	December	14,333	8,006	5,925	285,471
	AVERAGE	**13,416**	**8,119**	**5,287**	
1977	January	R14,140	R7,790	R6,028	R294,037
	February	R14,815	R7,949	R6,435	R283,300
	March	14,355	8,067	6,459	285,578
	AVERAGE (3 months)	**14,424**	**7,935**	**6,303**	

*See Definitions.
**Total as of December 31.
R=Revised data.
Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February 1977; March 1977 data are FEA estimates based on American Petroleum Institute data.

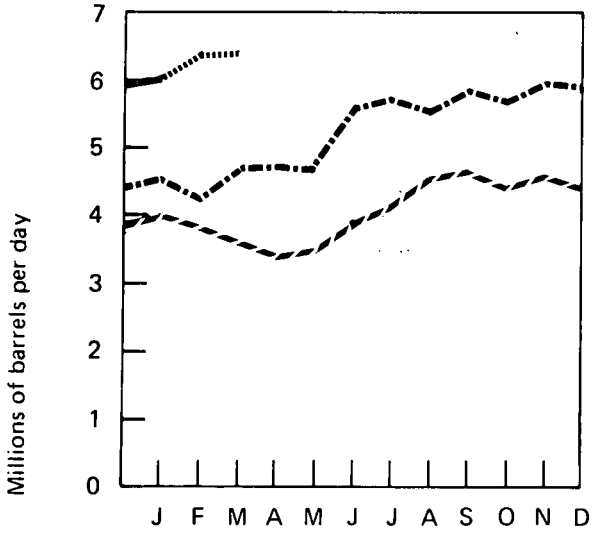
Crude Input to Refineries



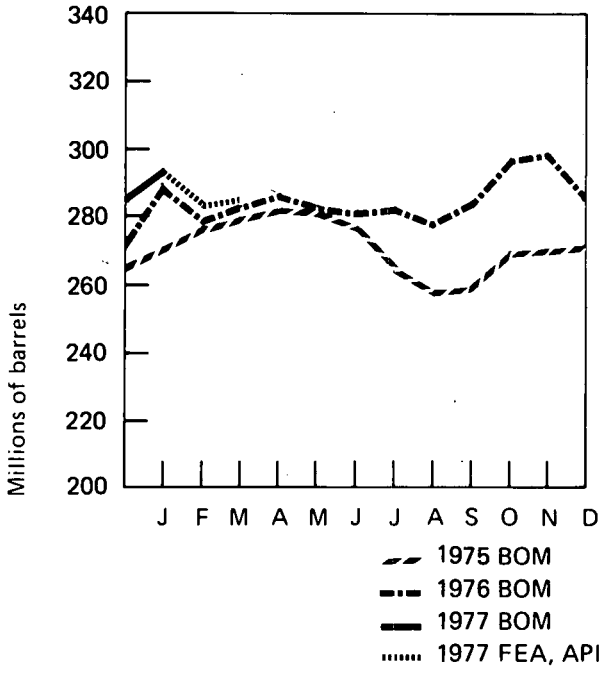
Domestic Production



Imports



Stocks



Total Refined Petroleum Products

		Domestic Demand	Imports*
		Thousands of barrels per day	
1972	**AVERAGE**	**16,367**	**2,525**
1973	**AVERAGE**	**R17,308**	**3,012**
1974	**AVERAGE**	**16,653**	**2,635**
1975	January	18,004	2,832
	February	17,084	2,348
	March	16,315	2,074
	April	16,048	1,662
	May	15,155	1,728
	June	15,610	1,502
	July	15,740	1,767
	August	15,806	1,717
	September	15,768	2,115
	October	16,377	1,940
	November	15,777	1,796
	December	18,185	1,949
	AVERAGE	**16,322**	**1,951**
1976	January	18,599	2,070
	February	17,429	2,423
	March	17,299	1,946
	April	16,672	1,806
	May	15,977	1,654
	June	16,836	1,858
	July	16,613	2,098
	August	16,642	1,826
	September	16,825	2,038
	October	17,052	1,808
	November	18,847	2,114
	December	20,506	2,468
	AVERAGE	**17,443**	**2,007**
1977	January	R20,452	R2,566
	February	R19,625	R2,977
	March	17,857	2,562
	AVERAGE (3 months)	**19,301**	**2,692**

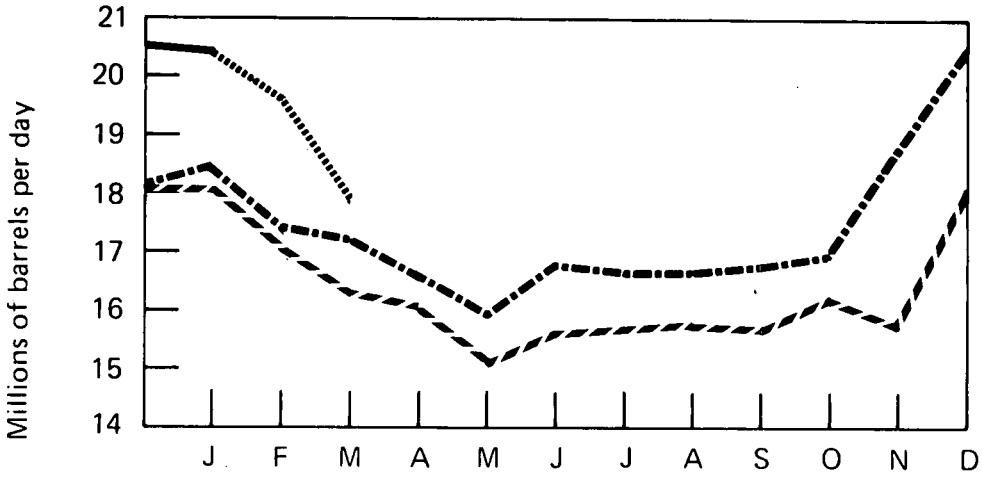
Total Petroleum Imports

(Crude Oil and Refined Products)

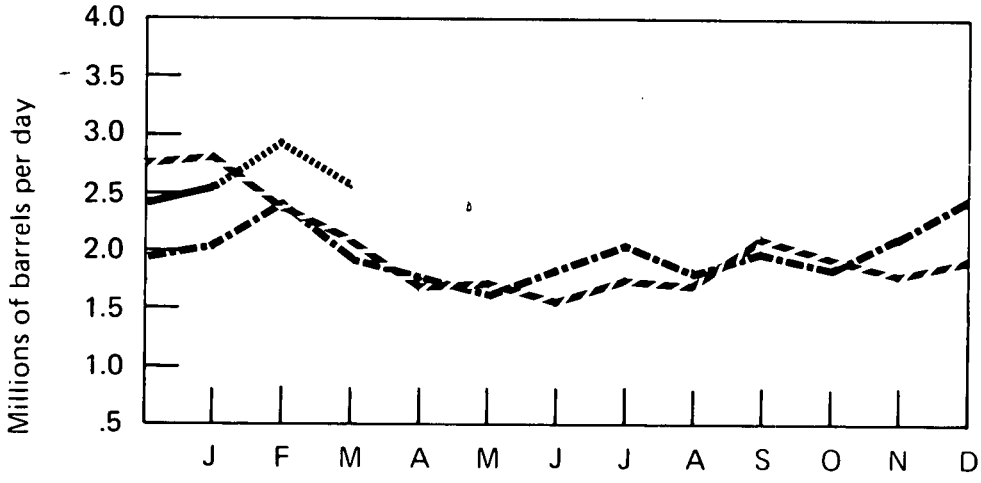
Thousands of barrels per day
4,741
6,256
6,112
6,861
6,176
5,730
5,040
5,214
5,407
5,959
6,298
6,804
6,329
6,419
6,425
6,056
6,665
6,631
6,684
6,596
6,323
7,479
7,890
7,382
7,913
7,507
8,060
8,393
7,294
R8,594
R9,412
9,021
8,996

*See Definitions.
R=Revised data.
Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February 1977; March 1977 data are FEA estimates based on American Petroleum Institute data.

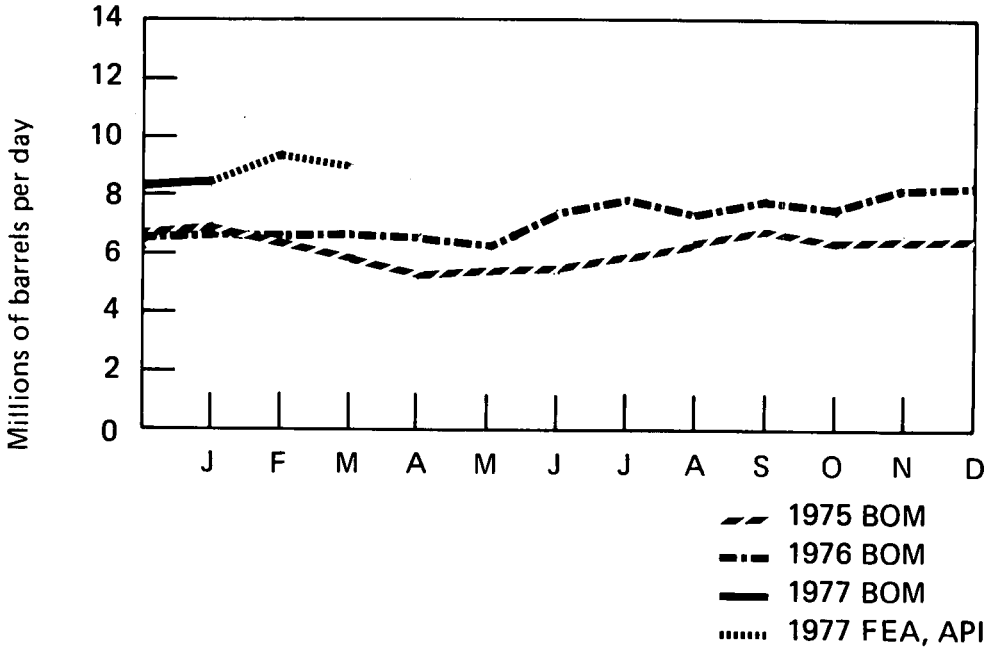
Total Refined Product Domestic Demand



Refined Product Imports



Total Petroleum Imports



Direct and Indirect* U.S. Petroleum Imports from OPEC Countries

	Algeria	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	United Arab Emirates	Venezuela	Other OPEC**	Total OPEC	Arab Members of OPEC
						Thousands of barrels per day					
1973											
Direct	134.2	212.7	222.7	164.3	458.9	487.3	70.6	1,124.7	106.5	2,981.9	914.4
Indirect	17.0	25.0	211.0	144.0	149.0	253.0	13.0	509.0	88.0	1,409.0	463.0
Total	**151.2**	**237.7**	**433.7**	**308.3**	**607.9**	**740.3**	**83.6**	**1,633.7**	**194.5**	**4,390.9**	**1,377.4**
1974											
Direct	190.2	300.1	468.8	4.4	697.6	460.6	70.5	979.3	88.3	3,259.8	748.5
Indirect	16.9	40.8	262.2	35.9	214.6	214.6	17.3	478.5	128.7	1,409.5	357.9
Total	**207.1**	**340.9**	**731.0**	**40.3**	**912.2**	**675.2**	**87.8**	**1,457.8**	**217.0**	**4,669.3**	**1,106.4**
1975											
Direct											
January	280.1	293.9	394.1	18.7	882.3	847.6	46.9	1,016.1	130.6	3,910.3	1,267.0
February	239.4	318.7	297.1	82.2	846.1	794.5	105.9	763.2	135.5	3,582.6	1,260.3
March	295.8	286.4	180.6	174.7	835.5	637.4	113.2	722.2	168.7	3,414.5	1,281.8
April	225.9	351.1	345.9	124.9	618.7	427.6	70.4	823.9	61.6	3,050.0	853.1
May	345.4	358.7	225.5	211.4	643.5	335.2	124.7	801.3	159.1	3,204.8	1,041.2
June	346.8	480.9	231.5	182.9	619.1	500.5	77.3	711.3	130.7	3,281.0	1,131.1
July	346.6	463.4	217.4	248.0	714.9	587.7	107.2	679.0	115.6	3,479.8	1,301.7
August	268.8	472.4	203.4	407.0	804.1	748.5	259.5	521.8	90.5	3,776.0	1,718.0
September	284.1	410.0	276.7	456.6	817.0	730.7	216.1	624.4	145.1	3,960.7	1,701.7
October	235.6	402.2	310.7	236.3	772.5	961.1	93.3	514.9	109.2	3,634.8	1,575.4
November	295.7	396.9	472.9	275.6	801.7	933.9	69.1	584.7	72.2	3,902.7	1,585.0
December	211.0	390.6	186.2	354.6	784.9	1,074.7	114.2	622.1	130.1	3,868.4	1,777.7
Total Direct	281.5	388.4	280.4	232.0	761.5	715.0	116.7	697.6	116.1	3,589.2	1,381.3
Indirect	6.7	49.3	244.4	97.3	76.3	176.6	37.5	332.5	143.2	1,163.8	408.8
Total	**288.2**	**437.7**	**524.8**	**329.3**	**837.8**	**891.6**	**154.2**	**1,030.1**	**259.3**	**4,753.0**	**1,790.1**
1976											
Direct											
January	345.5	478.0	387.5	451.3	781.7	1,111.9	118.8	533.7	86.3	4,294.7	2,045.7
February	357.4	465.3	241.2	328.4	830.9	1,080.9	118.5	838.6	102.8	4,364.0	1,925.3
March	347.2	552.0	292.5	372.2	896.8	1,145.0	159.4	468.1	111.8	4,345.0	2,058.5
April	446.5	467.6	323.3	356.2	997.0	1,027.5	195.5	496.8	81.6	4,392.0	2,036.2
May	410.6	485.5	183.7	362.0	855.1	1,141.5	214.5	487.7	135.9	4,276.5	2,138.8
June	501.2	603.6	323.2	487.8	1,127.6	1,205.0	290.1	668.0	70.5	5,277.0	2,486.5
July	451.0	581.0	374.3	487.1	1,136.7	1,327.7	305.2	808.0	208.8	5,679.8	2,711.4
August	510.0	554.5	294.2	463.5	1,029.4	1,317.6	228.1	704.0	133.6	5,234.9	2,597.4
September	435.3	570.2	274.6	491.0	1,173.0	1,288.1	335.1	932.4	198.7	5,698.4	2,748.2
October	357.2	487.4	284.2	456.2	1,097.5	1,366.2	304.4	772.8	232.7	5,358.5	2,578.8
November	502.0	647.1	316.8	533.9	1,173.8	1,316.1	341.1	810.8	170.7	5,812.3	2,768.4
December	379.9	556.4	289.5	637.2	1,193.6	1,404.0	448.0	868.4	194.8	5,971.8	2,956.6
Total Direct	428.3	537.4	298.5	453.3	1,025.2	1,229.8	255.2	699.2	134.0	5,060.9	2,421.0
Indirect	10.0	32.0	248.0	76.0	94.0	136.0	68.0	273.0	82.0	1,019.0	352.0
TOTAL	**438.3**	**569.4**	**546.5**	**529.3**	**1,119.2**	**1,365.8**	**323.2**	**972.2**	**216.0**	**6,079.9**	**2,773.0**
1977											
Direct											
January	493.0	571.6	316.4	543.8	1,278.2	1,346.1	297.4	785.6	344.4	5,976.5	2,932.1
Indirect	11.0	35.0	270.0	83.0	103.0	150.0	74.0	300.0	90.0	1,116.0	385.0
Total	**504.0**	**606.6**	**586.4**	**626.8**	**1,381.2**	**1,496.1**	**371.4**	**1,085.6**	**434.4**	**7,092.5**	**3,317.1**

*Indirect imports refer to U.S. imports of petroleum products, primarily from Caribbean and European areas, that have been refined from crude oil produced in other areas. U.S. imports of these products have been prorated to each OPEC country of origin based on the share of total crude oil supply in the Caribbean and European areas which was imported from each OPEC country. 1977 indirect import data are estimated.
**Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.
Source: Bureau of Mines and FEA.

U.S. Petroleum Imports from Non-OPEC Sources

	Bahamas	Canada	Netherlands Antilles	Puerto Rico	Trinidad and Tobago	Virgin Islands	Other	Total
				Thousands of barrels per day				
1973	**170.8**	**1,312.9**	**573.6**	**99.3**	**250.6**	**329.2**	**537.8**	**3,274.2**
1974	**159.3**	**1,067.6**	**509.6**	**90.4**	**241.2**	**391.7**	**392.6**	**2,852.4**
1975								
January	216.1	949.1	549.4	99.0	232.9	563.5	319.5	2,929.5
February	213.9	854.5	315.2	148.8	255.1	490.3	315.7	2,593.5
March	162.6	746.9	279.5	139.0	185.7	506.4	295.7	2,315.8
April	168.9	704.3	237.7	73.1	171.8	353.3	273.9	1,983.0
May	122.3	574.2	242.9	77.9	237.1	413.4	304.2	1,971.7
June	130.0	872.7	261.6	75.1	204.5	352.6	229.6	2,126.1
July	178.3	889.1	368.3	104.9	281.1	320.8	358.7	2,501.2
August	135.8	887.9	333.1	72.9	289.4	399.1	364.9	2,483.1
September	143.6	918.0	428.6	66.9	283.2	389.7	614.3	2,844.3
October	135.8	946.3	357.8	105.8	222.2	336.3	557.6	2,661.8
November	88.8	893.1	280.0	60.6	265.5	353.0	518.8	2,459.8
December	119.5	907.3	238.0	50.9	262.5	405.9	375.0	2,359.1
Total	**152.0**	**845.2**	**323.6**	**89.7**	**240.9**	**406.5**	**377.5**	**2,435.4**
1976								
January	134.1	681.7	291.7	71.0	343.2	468.4	380.2	2,370.3
February	127.6	644.9	262.4	122.2	326.3	462.3	321.7	2,267.4
March	90.4	590.2	328.7	114.0	315.6	424.5	475.5	2,338.9
April	131.9	578.4	274.9	68.5	291.9	341.2	516.5	2,203.3
May	95.2	614.9	214.1	70.6	257.5	388.5	405.7	2,046.5
June	104.2	653.3	190.4	54.3	319.3	427.5	453.0	2,202.0
July	112.8	581.7	259.1	77.9	279.2	386.5	513.4	2,210.6
August	98.5	580.9	268.7	81.5	163.6	437.2	516.6	2,147.0
September	143.1	564.8	273.3	104.1	182.6	408.5	537.9	2,214.3
October	78.3	562.0	239.0	92.2	215.2	460.5	502.0	2,149.2
November	140.4	561.8	267.6	104.1	254.3	454.4	465.3	2,247.9
December	141.5	578.3	400.3	98.5	324.2	408.4	470.5	2,421.3
Total	**116.5**	**599.3**	**274.6**	**88.1**	**272.6**	**422.3**	**460.6**	**2,234.0**
1977								
January	166.9	614.2	288.3	82.5	303.4	424.4	563.6	2,443.3

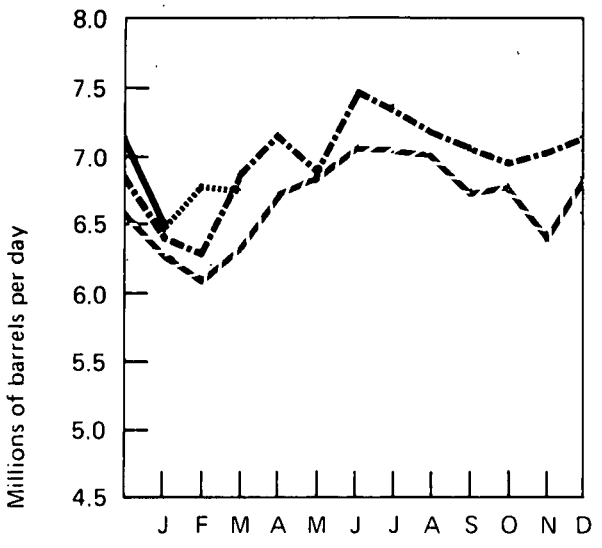
Source: Bureau of Mines.

Motor Gasoline

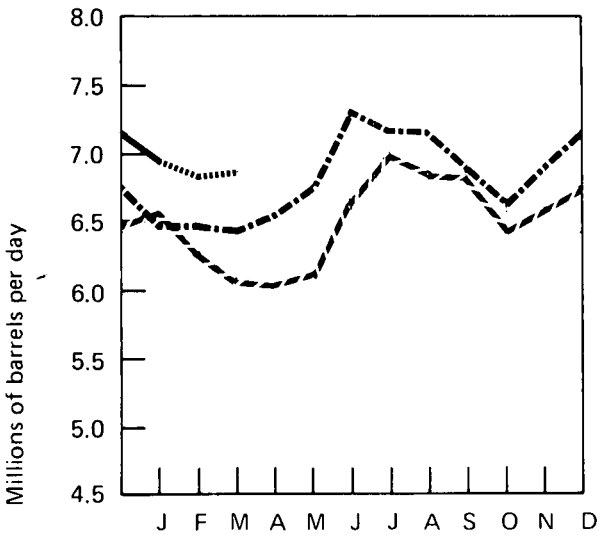
		Domestic Demand	Production*	Imports	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	**AVERAGE**	**6,376**	**6,281**	**68**	****212,770**
1973	**AVERAGE**	**6,674**	**6,527**	**134**	****209,395**
1974	**AVERAGE**	**6,537**	**6,358**	**204**	****218,346**
1975	January	6,206	6,509	262	***242,285
	February	6,096	6,276	171	251,915
	March	6,326	6,070	150	248,685
	April	6,718	6,046	133	232,556
	May	6,871	6,126	142	213,947
	June	7,076	6,669	177	207,114
	July	7,041	7,003	209	212,454
	August	7,008	6,872	232	215,480
	September	6,729	6,823	269	226,447
	October	6,778	6,410	207	221,493
	November	6,390	6,602	139	232,091
	December	6,808	6,786	119	234,925
	AVERAGE	**6,675**	**6,518**	**184**	
1976	January	6,398	6,483	92	240,464
	February	6,263	6,472	84	248,854
	March	6,890	6,455	123	239,049
	April	7,159	6,562	99	223,965
	May	6,853	6,774	112	225,037
	June	7,482	7,303	188	225,365
	July	7,315	7,174	190	226,922
	August	7,168	7,149	141	230,578
	September	7,079	6,878	171	229,751
	October	6,929	6,678	138	226,300
	November	7,038	6,938	146	227,742
	December	7,138	7,176	84	231,387
	AVERAGE	**6,978**	**6,837**	**131**	
1977	January	R6,466	6,934	R222	R252,608
	February	R6,791	R6,817	R161	R255,077
	March	6,764	6,889	160	259,171
	AVERAGE (3 months)	**6,670**	**6,882**	**182**	

*See Definitions.
**Total as of December 31.
***Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.
R=Revised data.
Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February 1977; March 1977 data are FEA estimates based on American Petroleum Institute data.

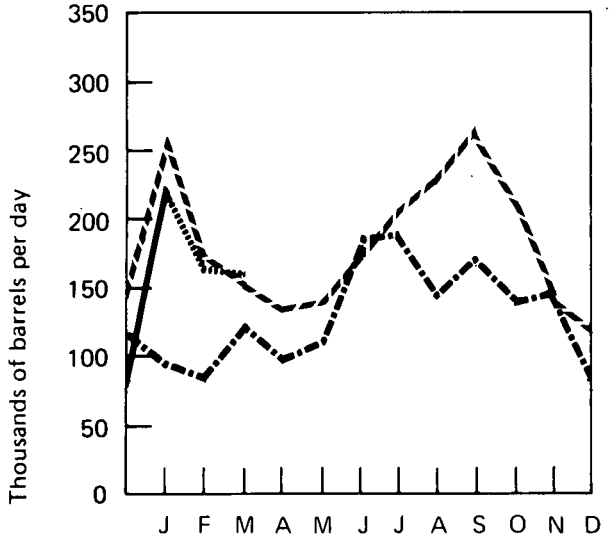
Domestic Demand



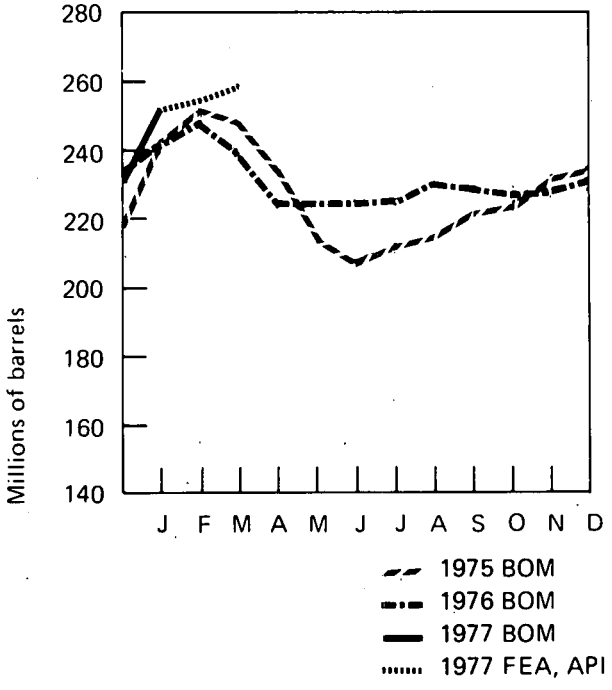
Production



Imports



Stocks

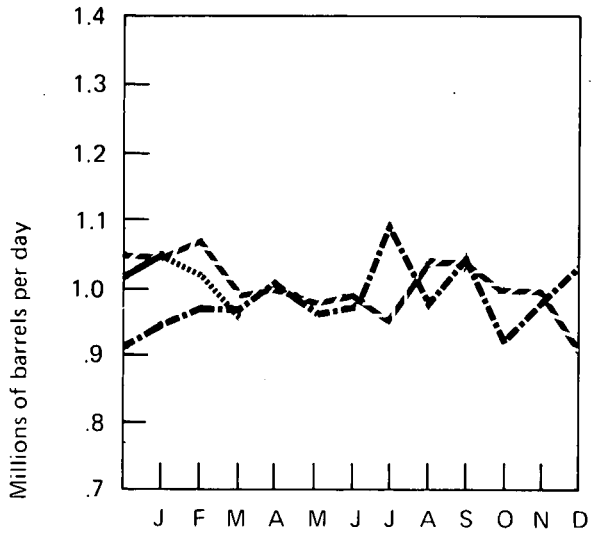


Jet Fuel

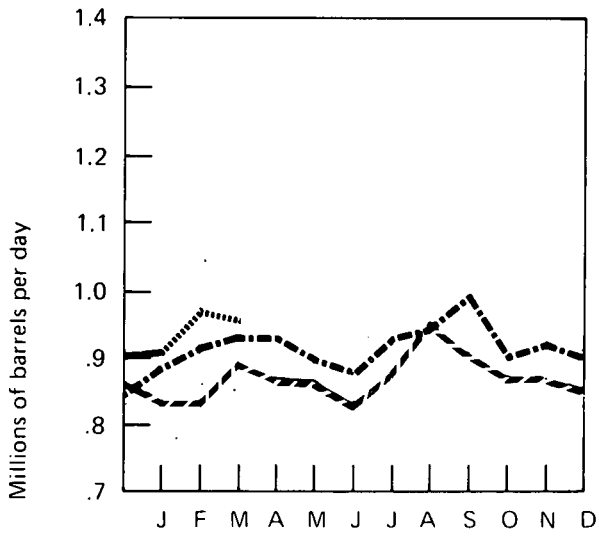
		Domestic Demand	Production	Imports	Stocks
		Thousands of barrels per day			Thousands of barrels
1972	**AVERAGE**	**1,045**	**847**	**194**	***25,493**
1973	**AVERAGE**	**1,059**	**859**	**212**	***28,544**
1974	**AVERAGE**	**993**	**836**	**163**	***29,435**
1975	January	1,041	831	229	**30,321
	February	1,075	835	200	29,133
	March	982	896	130	30,456
	April	1,006	864	137	30,263
	May	977	861	133	30,719
	June	989	839	106	29,337
	July	954	883	88	29,798
	August	1,046	958	132	31,103
	September	1,040	907	140	31,291
	October	997	864	106	30,410
	November	999	864	89	28,977
	December	911	849	109	30,380
	AVERAGE	**1,001**	**871**	**133**	
1976	January	948	889	69	30,618
	February	965	918	71	31,180
	March	965	927	86	32,619
	April	1,010	927	108	33,332
	May	960	899	106	34,664
	June	972	879	68	33,879
	July	1,099	933	130	32,732
	August	965	942	38	33,121
	September	1,048	990	63	33,204
	October	911	890	50	34,032
	November	978	920	56	33,859
	December	1,027	900	72	32,085
	AVERAGE	**987**	**918**	**76**	
1977	January	R1,051	917	R74	R30,170
	February	R1,022	R974	R67	R30,449
	March	954	950	54	31,995
	AVERAGE (3 months)	**1,009**	**946**	**65**	

*Total as of December 31.
**Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.
R=Revised data.
Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February 1977; March 1977 data are FEA estimates based on American Petroleum Institute data.

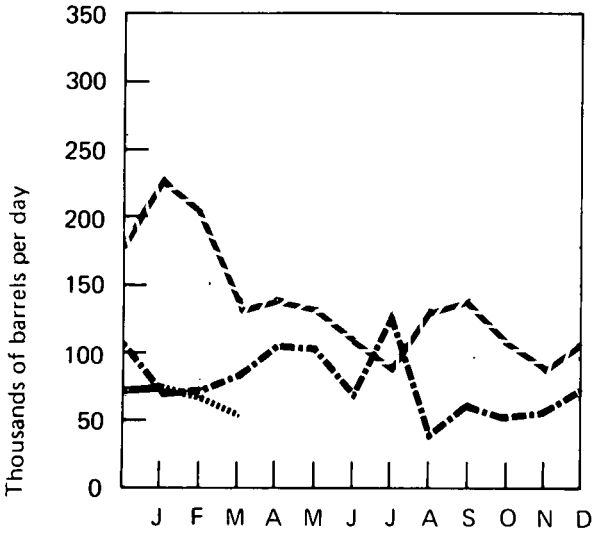
Domestic Demand



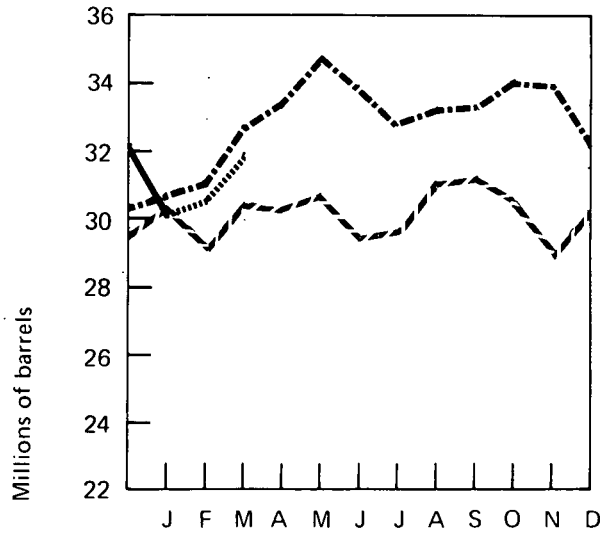
Production

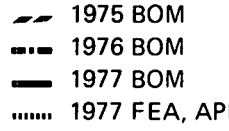


Imports



Stocks



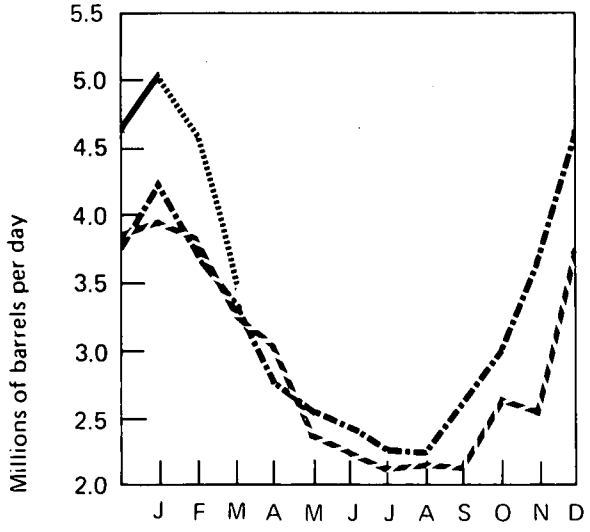


Distillate Fuel Oil

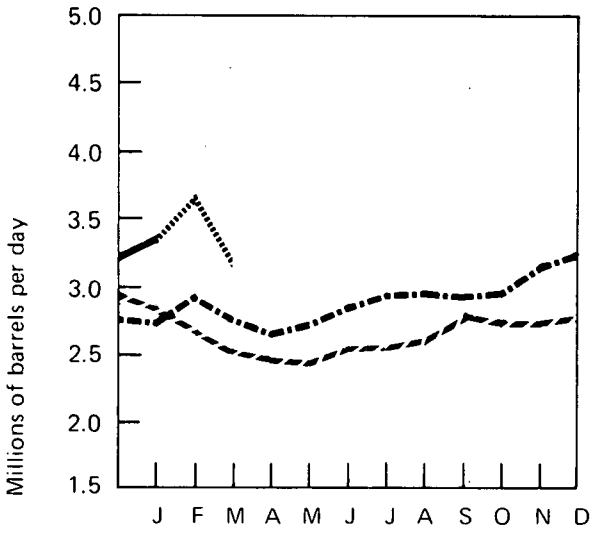
		Domestic Demand	Production*	Imports	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	**AVERAGE**	**2,913**	**2,630**	**182**	****154,284**
1973	**AVERAGE**	**3,092**	**2,820**	**392**	****196,421**
1974	**AVERAGE**	**2,948**	**2,668**	**289**	****200,029**
1975	January	3,963	2,852	334	***199,715
	February	3,803	2,679	302	176,696
	March	3,292	2,532	255	161,111
	April	3,094	2,487	110	146,214
	May	2,382	2,431	136	152,027
	June	2,267	2,574	69	163,306
	July	2,109	2,590	104	181,472
	August	2,173	2,592	92	197,323
	September	2,163	2,812	130	220,732
	October	2,677	2,745	104	226,113
	November	2,544	2,767	96	235,749
	December	3,792	2,783	138	208,787
	AVERAGE	**2,851**	**2,653**	**155**	
1976	January	4,298	2,734	164	165,428
	February	3,687	2,961	207	150,439
	March	3,336	2,793	151	138,306
	April	2,788	2,655	96	137,249
	May	2,519	2,738	97	147,057
	June	2,436	2,885	151	165,064
	July	2,255	2,959	126	190,861
	August	2,237	2,982	131	217,930
	September	2,618	2,947	147	232,230
	October	3,029	2,995	141	235,599
	November	3,714	3,181	135	223,648
	December	4,650	3,255	179	185,948
	AVERAGE	**3,130**	**2,924**	**144**	
1977	January	R5,076	R3,375	R315	R142,989
	February	R4,597	R3,690	R597	R133,065
	March	3,489	3,180	504	139,832
	AVERAGE (3 months)	**4,380**	**3,406**	**468**	

*See Definitions.
**Total as of December 31.
***Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.
R=Revised data.
Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February 1977; March 1977 data are FEA estimates based on American Petroleum Institute data.

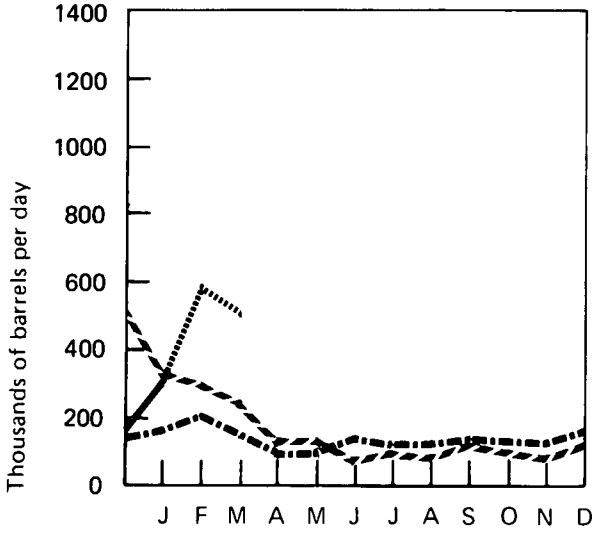
Domestic Demand



Production



Imports



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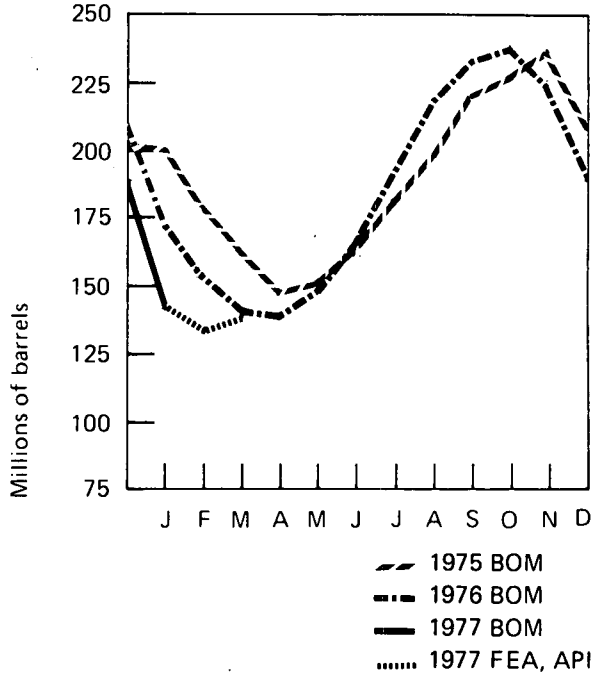


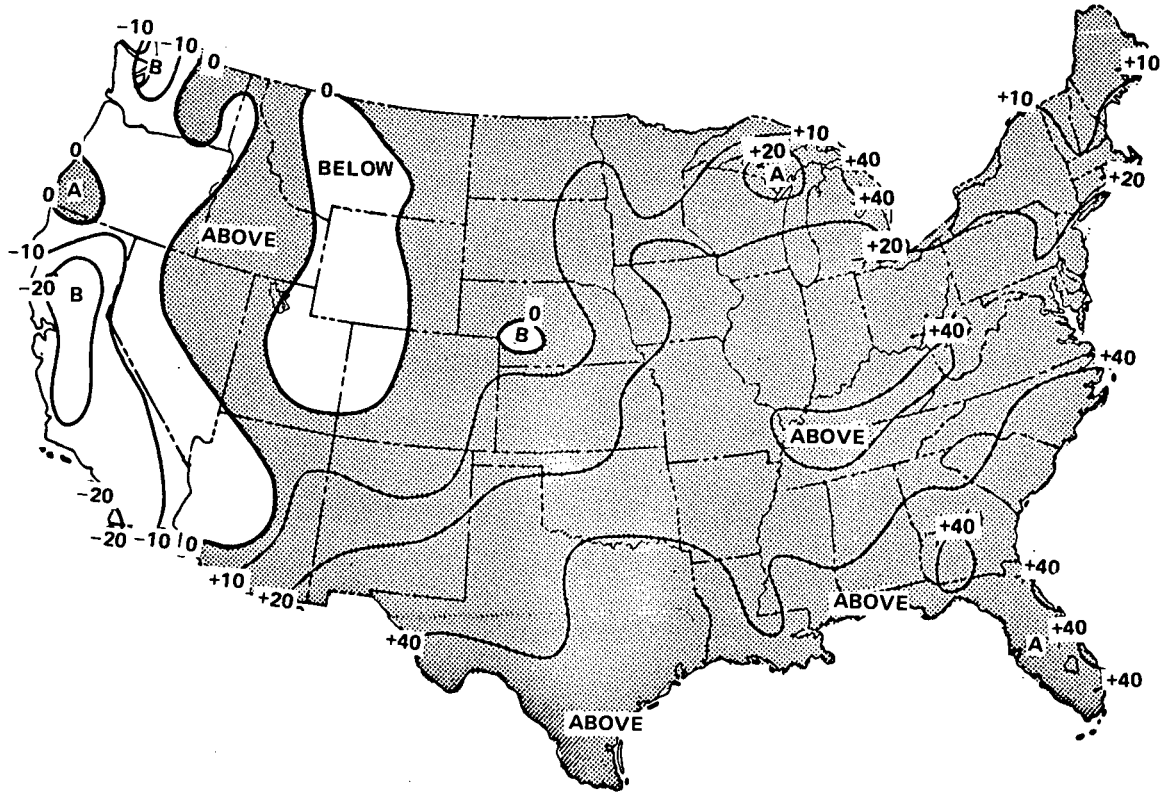
Distillate Oil Heating Degree-Days*

Petroleum Administration for Defense (PAD) Districts	APRIL (March 28 through May 1, 1977) 1977	1976**	Normal (1941-70)**	Cumulative Since July 1 1976-77	1975-76**	Normal (1941-70)**
PAD District I	360.4	372.8 (-3.3)	452.6 (-20.4)	5,119.9	4,155.4 (23.2)	4,632.3 (10.5)
New England Conn., Maine, Mass., N.H., R.I., Vt.	509.3	482.2 (5.6)	636.5 (-20.0)	6,187.1	5,342.0 (15.8)	5,871.5 (5.4)
Middle Atlantic Del., Md., N.J., N.Y., Pa.	417.5	439.6 (-5.0)	517.5 (-19.3)	5,793.0	4,668.6 (24.1)	5,222.9 (10.9)
Lower Atlantic Fla., Ga., N.C., S.C., Va., W.Va.	93.2	122.9 (-24.2)	134.6 (-30.8)	2,636.3	1,901.1 (38.7)	2,159.8 (22.1)
PAD District II Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N.Dak., Ohio, Okla., S.Dak., Tenn., Wisc.	395.7	492.8 (-19.7)	572.8 (-30.9)	6,808.1	5,592.0 (21.7)	6,156.7 (10.6)
PAD District III Ala., Ark., La., Miss., N.Mex., Tex.	66.6	88.8 (-25.0)	105.7 (-37.0)	2,879.3	2,043.2 (40.9)	2,286.4 (25.9)
PAD District IV Colo., Idaho, Mont., Utah, Wyo.	563.2	628.8 (-10.4)	642.3 (-12.3)	5,975.7	5,940.0 (0.6)	6,147.8 (-2.8)
PAD District V Ariz., Calif., Nev., Oreg., Wash.	357.1	437.3 (-18.3)	434.8 (-17.9)	3,341.7	3,605.5 (-7.3)	3,806.2 (-12.2)
U.S. AVERAGE	**353.5**	**389.3 (-9.2)**	**461.5 (-23.4)**	**5,323.2**	**4,364.7 (22.0)**	**4,834.5 (10.1)**

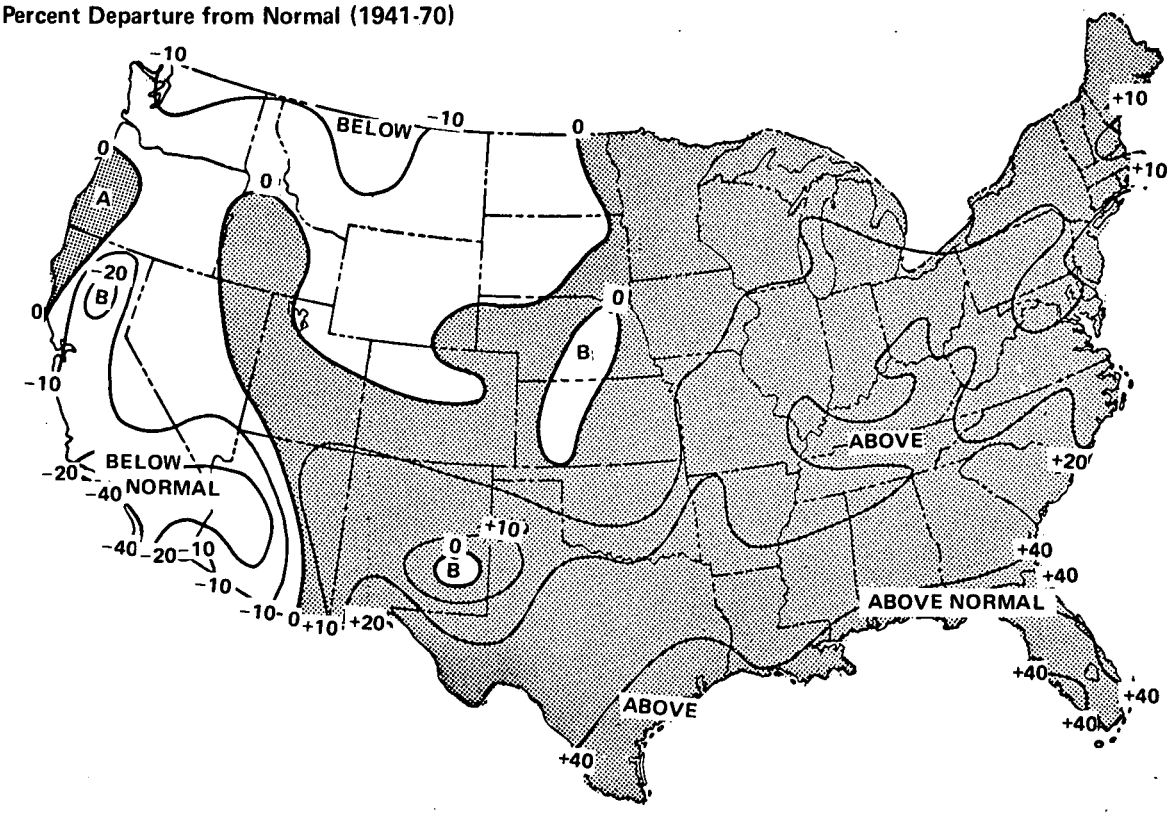
*See Explanatory Note 4 for explanation of distillate oil heating degree-days.
**Percentage change in parentheses.

Heating Degree-Days Accumulated from July 1, 1976 through May 1, 1977

Percent Departure from 1975-76



Percent Departure from Normal (1941-70)



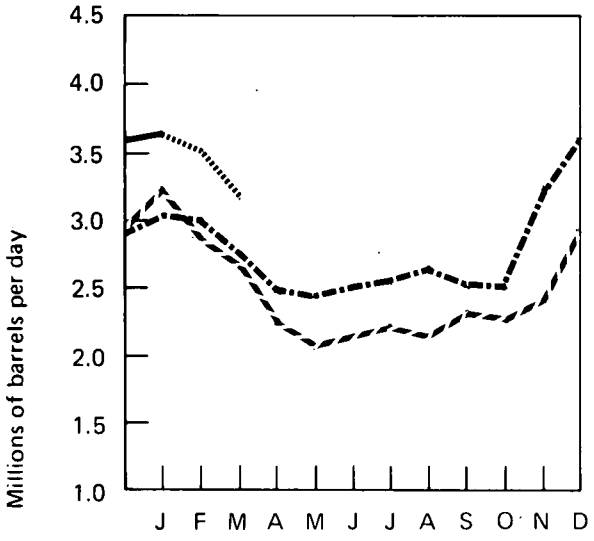
Note: Above normal heating degree-days correspond to below normal temperatures.
Source: Department of Commerce–NOAA.

Residual Fuel Oil

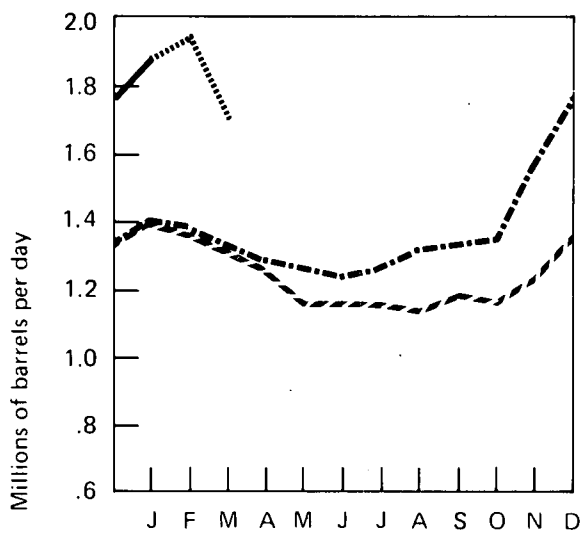
		Domestic Demand	Production	Imports	Stocks
		Thousands of barrels per day			Thousands of barrels
1972	**AVERAGE**	**2,529**	**799**	**1,742**	***55,216**
1973	**AVERAGE**	**2,822**	**971**	**1,853**	***53,480**
1974	**AVERAGE**	**2,639**	**1,070**	**1,587**	***59,694**
1975	January	3,253	1,415	1,657	**69,233
	February	2,849	1,354	1,402	66,495
	March	2,669	1,299	1,293	64,148
	April	2,232	1,245	1,054	66,340
	May	2,087	1,151	1,160	73,498
	June	2,177	1,152	902	69,660
	July	2,220	1,155	1,125	71,526
	August	2,157	1,146	1,021	71,857
	September	2,328	1,183	1,311	76,938
	October	2,268	1,165	1,251	81,858
	November	2,405	1,214	1,225	83,131
	December	2,912	1,354	1,283	74,126
	AVERAGE	**2,462**	**1,235**	**1,223**	
1976	January	3,069	1,415	1,406	66,592
	February	3,007	1,394	1,703	68,859
	March	2,779	1,311	1,342	65,132
	April	2,496	1,283	1,258	66,458
	May	2,439	1,257	1,134	65,147
	June	2,520	1,241	1,240	64,272
	July	2,555	1,266	R1,462	69,812
	August	2,678	1,321	1,307	68,490
	September	2,517	1,330	1,442	76,436
	October	2,511	1,351	1,234	79,117
	November	3,253	1,581	1,474	73,284
	December	3,608	1,772	1,791	72,344
	AVERAGE	**2,786**	**1,377**	**1,402**	
1977	January	R3,676	R1,889	R1,531	R64,749
	February	R3,505	R1,945	R1,798	R71,304
	March	3,192	1,694	1,536	69,033
	AVERAGE (3 months)	**3,456**	**1,839**	**1,616**	

*Total as of December 31.
**Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.
R=Revised data.
Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February 1977; March 1977 data are FEA estimates based on American Petroleum Institute data.

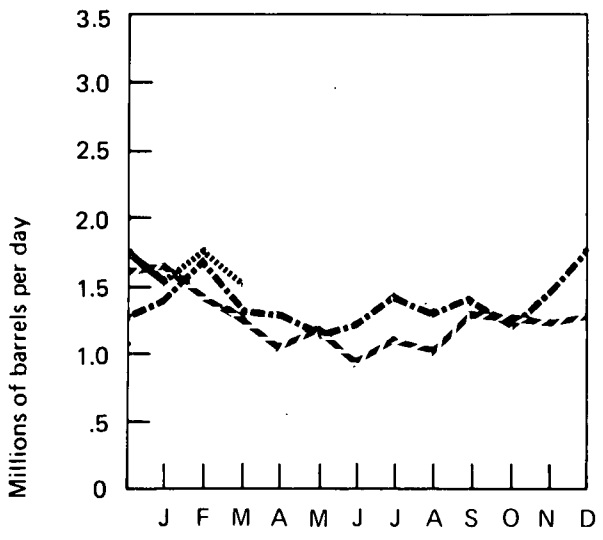
Domestic Demand



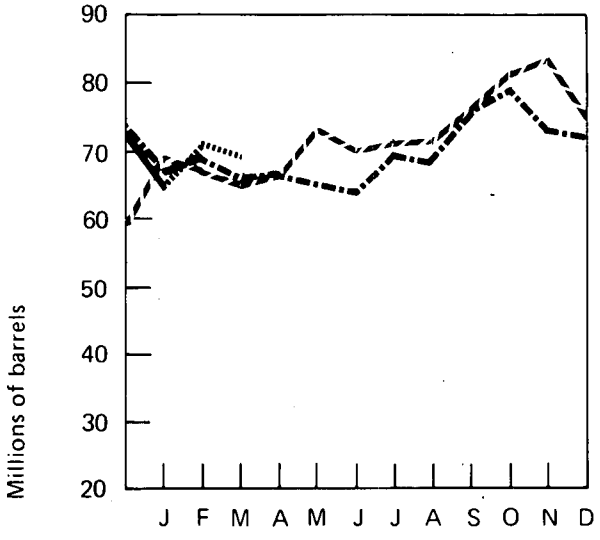
Production



Imports



Stocks

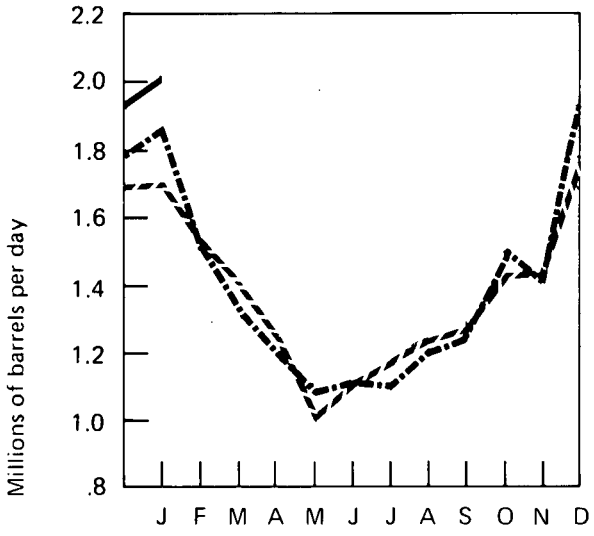


Natural Gas Liquids

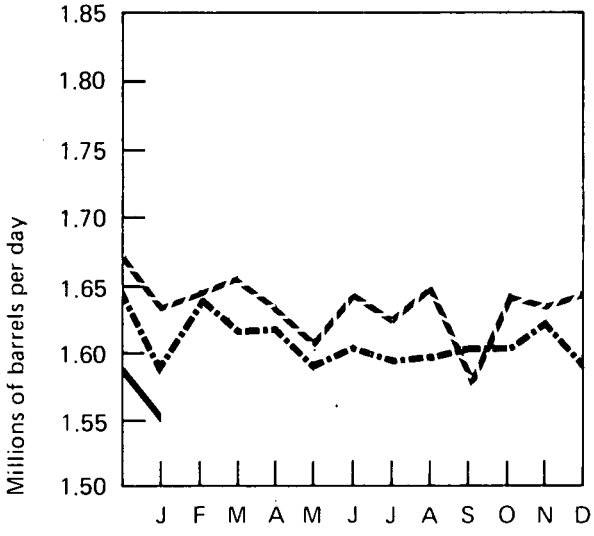
		Domestic Demand*	Production*		Used at Refineries*	Imports	Stocks*
			At processing plants	At refineries			
			Thousands of barrels per day				Thousands of barrels
1972	**AVERAGE**	**1,420**	**1,744**	**365**	**826**	**174**	****92,024**
1973	**AVERAGE**	**1,454**	**1,738**	**375**	**815**	**239**	****106,659**
1974	**AVERAGE**	**1,422**	**1,688**	**338**	**746**	**212**	****120,175**
1975	January	1,708	1,630	307	756	257	110,697
	February	1,512	1,646	296	734	181	106,205
	March	1,404	1,658	280	731	178	104,365
	April	1,242	1,635	273	667	176	105,521
	May	1,002	1,607	299	628	97	119,052
	June	998	1,646	323	659	166	132,553
	July	1,191	1,621	336	701	173	139,095
	August	1,227	1,650	357	690	163	145,920
	September	1,278	1,577	326	703	209	148,948
	October	1,429	1,643	310	729	198	147,793
	November	1,444	1,635	309	759	196	145,052
	December	1,787	1,646	310	768	232	132,653
	AVERAGE	**1,352**	**1,633**	**311**	**710**	**185**	
1976	January	1,885	1,585	305	728	240	116,707
	February	1,518	1,640	316	793	270	113,373
	March	1,303	1,615	333	674	194	117,486
	April	1,201	1,616	349	716	171	123,100
	May	1,074	1,588	376	695	144	131,421
	June	1,110	1,606	356	718	163	139,291
	July	1,103	1,592	354	710	147	147,034
	August	1,213	1,596	362	695	160	152,704
	September	1,243	1,601	352	713	152	156,436
	October	1,497	1,601	309	709	203	152,666
	November	1,413	1,621	331	726	244	143,422
	December	1,921	1,589	341	853	269	124,518
	AVERAGE	**1,407**	**1,604**	**340**	**725**	**196**	
1977	January	2,018	1,549	323	730	331	NA

*See Explanatory Note 5.
**Total as of December 31.
NA=Not available.
Note: The stocks series has been revised to include stocks of liquefied refinery gas (LRG).
Source: Bureau of Mines.

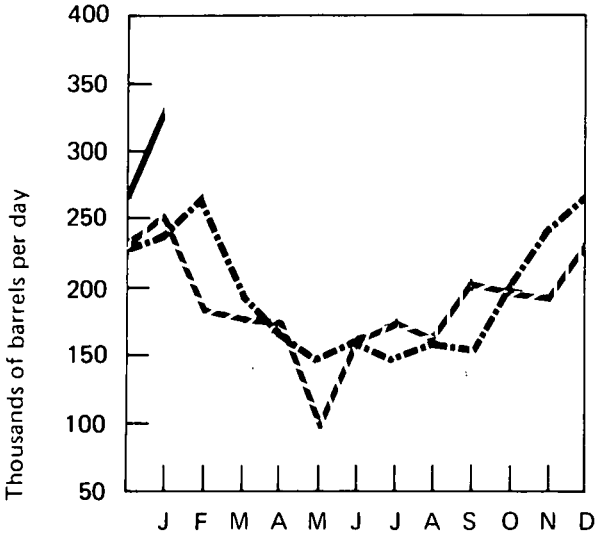
Domestic Demand



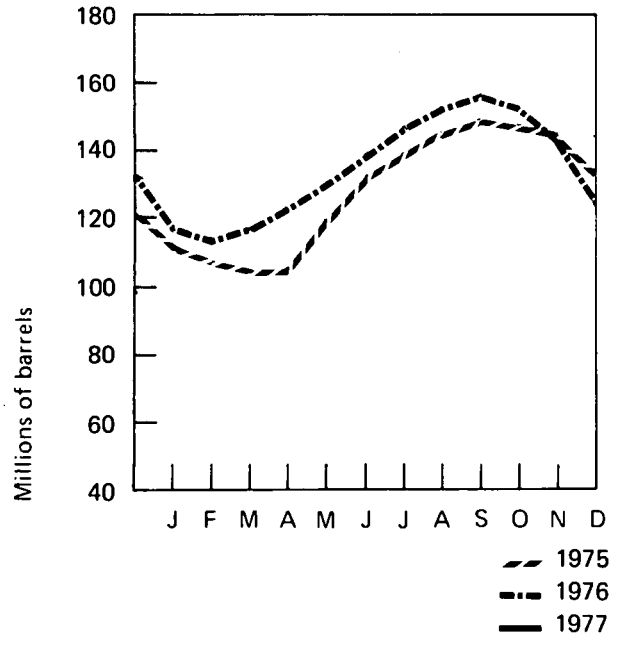
Production at Processing Plants



Imports



Stocks



U.S. Petroleum Supply and Demand

	1976 Actual				
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
	Thousands of barrels per day				
Supply					
Crude oil and lease condensate production	8,194	8,131	8,120	8,033	8,119
Natural gas plant liquids production	1,612	1,604	1,597	1,604	1,604
Other hydrocarbon supply	37	38	37	40	38
Crude oil imports	4,520	5,023	5,740	5,856	5,287
Refined products imports*	2,140	1,771	1,987	2,130	2,008
Total new supply	16,503	16,567	17,481	17,663	17,056
Processing gain	485	495	469	460	478
Stock change—all oils	-797	+363	+1,065	-866	-58
Total net supply	17,785	16,699	16,885	18,989	17,592
Unaccounted for crude oil**	+204	+8	+42	+101	+89
Demand					
Crude oil and refined products exports	192	204	220	274	223
Crude oil losses	14	14	15	15	14
Domestic demand for refined products***	17,783	16,489	16,692	18,801	17,444
Total demand	17,989	16,707	16,927	19,090	17,681

	1977 Actual†	1977 Forecast††			
	1st Qtr.	2nd. Qtr.	3rd Qtr.	4th Qtr.	Year†††
	Thousands of barrels per day				
Supply					
Crude oil and lease condensate production	7,935	8,047	8,347	9,002	8,336
Natural gas plant liquids production	1,556	1,541	1,524	1,541	1,540
Other hydrocarbon supply	39	36	36	36	37
Crude oil imports	6,303	6,280	6,307	5,507	6,098
Refined products imports*	2,632	1,194	1,244	2,102	1,790
Total new supply	18,465	17,098	17,458	18,188	17,801
Processing gain	533	516	527	522	524
Stock change—all oils	-228	+565	+524	-395	+117
Total net supply	19,226	17,049	17,461	19,105	18,208
Unaccounted for crude oil**	+221	0	0	0	+54
Demand					
Crude oil and refined products exports	191	206	198	195	198
Crude oil losses	15	13	13	13	13
Domestic demand for refined products***	19,241	16,830	17,250	18,897	18,051
Total demand	19,447	17,049	17,461	19,105	18,262

*Includes plant condensate and unfinished oils.
**Balancing item resulting from statistical inconsistencies.
***Includes international bunkers.
†Partially estimated.
††See Explanatory Note 6 for discussion of basic assumptions for forecast.
†††Calculated using actual 1st Quarter data and FEA forecast for remainder of year.
Sources: 1976—Bureau of Mines; 1st Quarter 1977—BOM, FEA, and API; 2nd, 3rd, and 4th Quarters 1977—FEA forecast.

Natural Gas

Net injections of natural gas into underground storage reservoirs in March totaled 53 billion cubic feet, reflecting the warmer than usual weather. (March is normally the last month of the withdrawal season.) However, the heavy drawdown on storage inventories in November, December, and January reduced the working gas inventories to 1.23 trillion cubic feet, 8.5 percent below the level at the end of March 1976.

Marketed production of natural gas in March was estimated to be 1.1 percent below marketed production in March 1976. For the first 3 months of 1977, estimated marketed production was 1.6 percent below the level during the same period of 1976.

Estimated imports of natural gas in March were 16.5 percent above imports in March 1976, and during the first 3 months of 1977, were estimated to be 11.7 percent above the import level during the same months of 1976.

Domestic consumption of natural gas in March was estimated to be 1.2 percent below consumption in March 1976. Consumption during the first 3 months of 1977 was estimated at 0.4 percent below consumption in January-March of 1976.

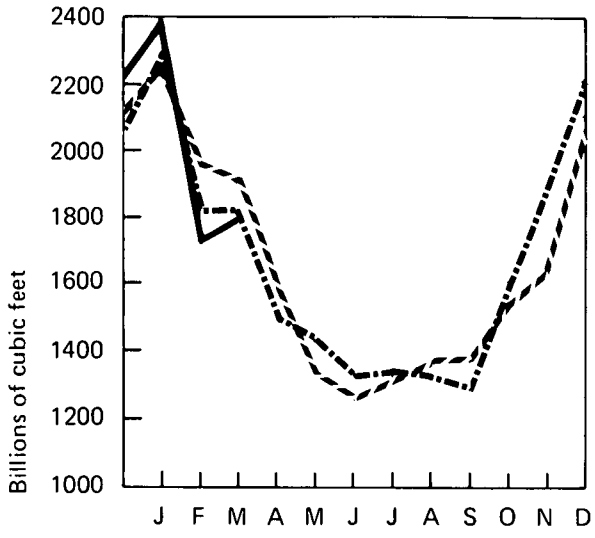
Domestic producer sales to major interstate pipeline companies in December 1976 were 3.4 percent below sales in December 1975; sales for the year 1976 were 4.8 percent below 1975 sales.

Natural Gas

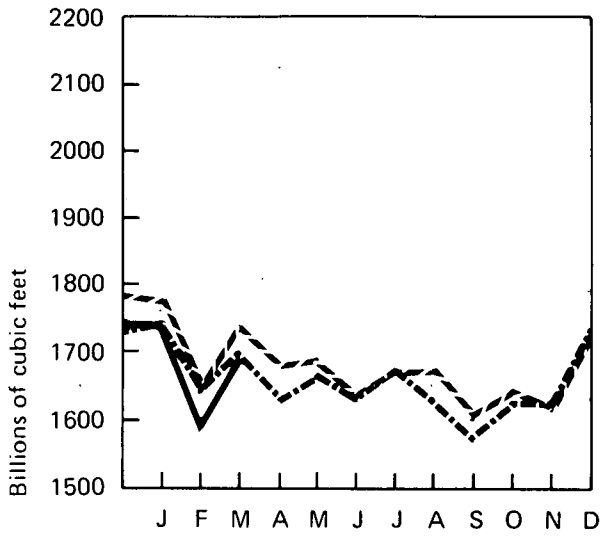
		Domestic Consumption*	Marketed Production*	Domestic Producer Sales to Major Interstate Pipelines	Imports
			Billion cubic feet		
1972	**TOTAL**	**22,102**	**22,532**	**12,429**	**1,019**
1973	**TOTAL**	**22,049**	**22,648**	**12,067**	**1,033**
1974	**TOTAL**	**21,223**	**21,601**	**11,462**	**959**
1975	January	2,248	1,778	950	81
	February	1,939	1,640	867	75
	March	1,903	1,740	948	83
	April	1,575	1,677	906	82
	May	1,331	1,689	898	80
	June	1,257	1,634	859	76
	July	1,313	1,677	873	80
	August	1,369	1,677	882	75
	September	1,370	1,603	836	74
	October	1,544	1,646	877	80
	November	1,640	1,618	853	81
	December	2,049	1,730	903	86
	TOTAL	**19,538**	**20,109**	**10,652**	**953**
1976	January	2,297	1,745	894	83
	February	1,823	1,641	850	79
	March	1,822	1,709	894	85
	April	R1,490	1,633	849	85
	May	1,434	1,668	860	83
	June	1,327	1,637	815	77
	July	1,346	1,671	822	74
	August	1,327	1,631	810	76
	September	R1,290	1,562	793	74
	October	1,611	1,632	840	85
	November	R1,873	1,629	841	81
	December	R2,238	R1,745	872	R84
	TOTAL	**R19,878**	**R19,903**	**10,140**	**R966**
1977	January	2,400	R**1,742	NA	***88
	February	R1,720	R***1,580	NA	***89
	March	1,800	***1,690	NA	***99
	TOTAL (3 months)	**5,920**	**5,012**	**NA**	**276**

*See Explanatory Note 7.
**Preliminary data.
***Projected data.
R=Revised data.
NA=Not available.
Note: All monthly Domestic Consumption data are estimated.
Sources: Consumption, Marketed Production, and Imports—Bureau of Mines; Domestic Producer Sales—Federal Power Commission.

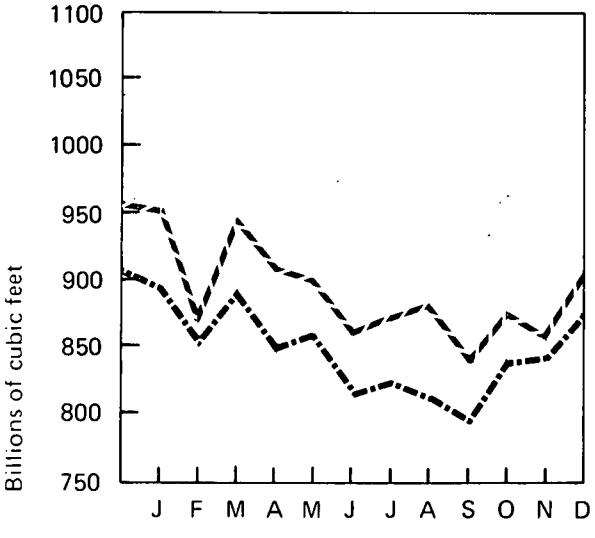
Domestic Consumption



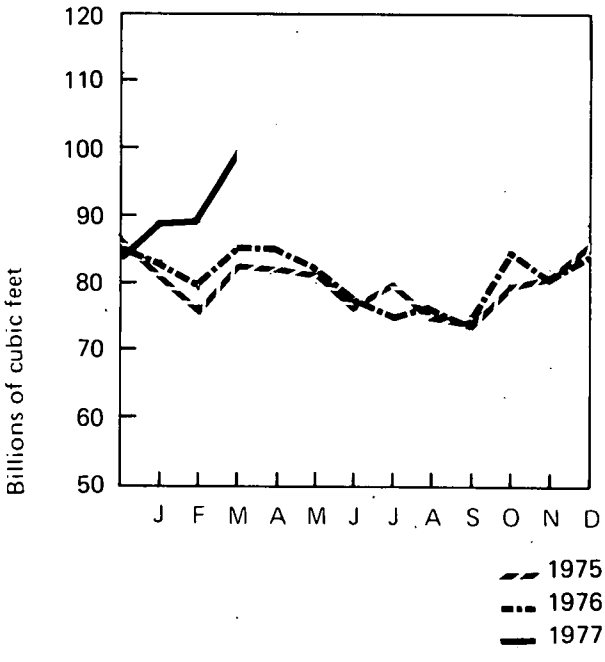
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports

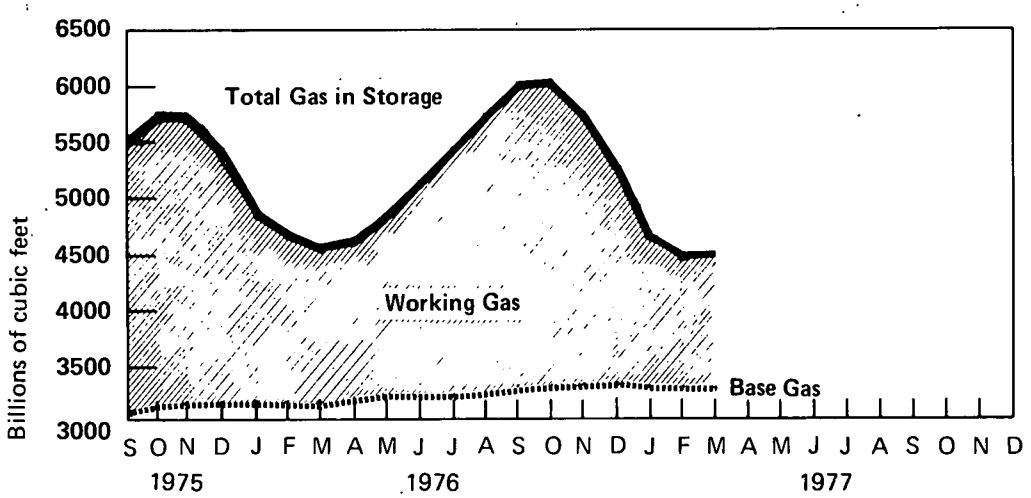


Natural Gas (Continued)

Natural Gas in Underground Storage*

		Total Gas in Storage	Base Gas	Working Gas	Storage Injections	Storage Withdrawals	Net Storage Injections
				Billion cubic feet			
1974	October**	5,445	3,042	2,403	***	***	***
1975	September	5,558	3,084	2,474	225	31	193
	October	5,770	3,128	2,642	248	94	154
	November	5,760	3,172	2,588	99	150	-51
	December	5,423	3,173	2,250	35	375	-340
1976	January	4,868	3,194	1,674	22	574	-552
	February	4,660	3,197	1,463	67	275	-208
	March	4,543	3,195	1,348	81	199	-118
	April	4,650	3,208	1,443	176	70	106
	May	4,878	3,214	1,664	262	34	228
	June	5,163	3,220	1,943	312	27	285
	July	5,476	3,244	2,232	311	11	300
	August	5,759	3,272	2,487	295	13	282
	September	6,021	3,317	2,704	267	21	246
	October	6,030	3,327	2,703	132	123	9
	November	5,779	3,330	2,449	41	298	-257
	December	5,284	3,334	1,950	23	518	-495
1977	January	4,621	3,317	1,304	17	681	-664
	February	4,490	3,307	1,183	104	234	-130
	March	4,544	3,310	1,234	190	137	53

Gas in Storage



*See Explanatory Note 8.
**Data reported as of November 1, 1974.
***Between November 1, 1974, and August 31, 1975, a total of 1,658 billion cubic feet of gas was injected into storage and 1,686 billion cubic feet was withdrawn, for net storage injections of -28 billion cubic feet.
Sources: Federal Energy Administration and Federal Power Commission.

Coal

Production of bituminous coal and lignite for the first 3 months of 1977 totaled 153.1 million tons, down 6.7 percent from the production level for the first 3 months of 1976. The decline is the result of wildcat strikes and the severe cold weather which restricted coal production and deliveries during the first 2 months of the year. However, March 1977 production reached a record monthly level for the 1970's of 65.0 million tons, an increase of 8.3 percent over the amount produced during March 1976. This record level of production corresponds to the rectification of production lost in the earlier part of the year, and may represent the beginning of a trend to expand production in anticipation of a possible strike by the United Mine Workers of America in December.

In February 1977, the United States exported 3.1 million tons of coal, an increase of 43.7 percent over the amount exported in January 1977, and about the same level as exports in February 1976. Frozen coal in hopper cars and bottlenecks at frozen Eastern seaport waterways, however, prevented exports from attaining the higher levels that prevailed in the latter 3 quarters of 1976.

Total domestic consumption of bituminous coal and lignite for 1976 has been revised to 597.5 million tons, which is 7.4 percent greater than the 1975 consumption level. The following table gives the consumption totals for the various economic consuming sectors in millions of tons:

	1976	1975	Percent Difference
Electric Utilities	445,750	403,249	+10.5
Coke Plants	84,324	83,272	+1.3
General Industry	60,505	62,498	-3.2
Retail	6,900	7,282	-5.3
Grand Total	**597,479**	**556,301**	**+7.4**

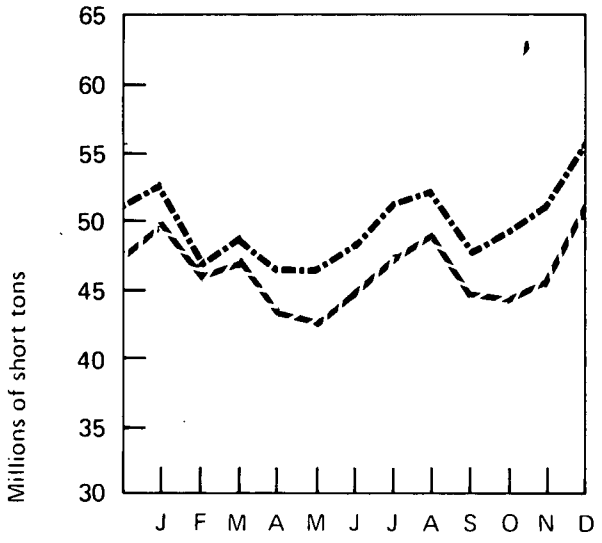
Electric utilities consumed 43.1 million tons of bituminous coal and lignite in January 1977, up 8.2 percent from consumption in January 1976. Utility stock levels were at 103.8 million tons, or a 75-day supply, compared to an 88-day supply during the previous month and an 81-day supply in January 1976. This stock depletion is attributable to increased demand for coal-fired electricity generation and reduced coal production during the exceptionally cold weather.

Bituminous and Lignite

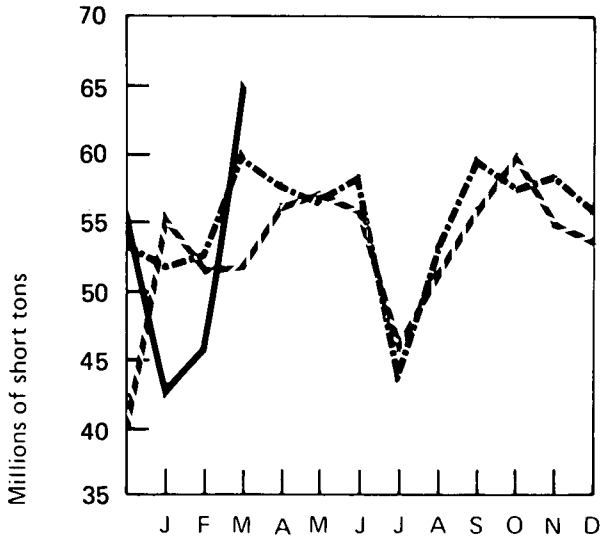
		Domestic Consumption*	Production*	Exports	Stocks
			Thousands of short tons		
1972	**TOTAL**	**516,776**	**595,386**	**55,997**	****117,442**
1973	**TOTAL**	**556,022**	**591,738**	**52,903**	****103,022**
1974	**TOTAL**	**552,709**	**603,406**	**59,926**	****95,528**
1975	January	49,841	55,610	4,254	95,512
	February	45,699	51,135	4,470	97,028
	March	47,202	51,910	5,653	97,832
	April	43,537	56,330	6,159	102,663
	May	42,658	57,045	7,011	109,666
	June	44,777	55,730	6,269	114,857
	July	47,454	45,560	4,691	109,133
	August	49,190	51,160	5,859	108,522
	September	44,032	56,060	4,529	111,922
	October	44,929	60,030	4,647	120,344
	November	45,946	54,655	7,593	125,808
	December	51,036	53,213	4,534	127,115
	TOTAL***	**556,301**	**648,438**	**65,669**	
1976	January	52,919	51,495	3,697	119,149
	February	46,800	52,630	3,050	118,970
	March	48,607	60,050	3,979	123,441
	April	R46,450	57,850	5,780	R128,343
	May	R46,506	56,605	5,667	134,621
	June	R48,472	58,430	6,569	140,237
	July	R51,696	43,250	4,879	129,606
	August	R52,069	53,440	4,223	123,662
	September	R47,750	59,675	5,613	129,867
	October	49,248	57,445	5,871	133,581
	November	51,320	58,350	5,451	R135,402
	December	55,642	55,780	4,625	133,673
	TOTAL***	**R597,479**	**665,000**	**59,406**	
1977	January	NA	R42,145	2,143	NA
	February	NA	45,950	3,079	NA
	March	NA	65,020	NA	NA
	TOTAL	NA	**153,115** (3 months)	**5,223** (2 months)	

*See Explanatory Note 9.
**Total as of December 31.
***Totals may not add due to rounding.
R=Revised data.
NA=Not available.
Source: Bureau of Mines.

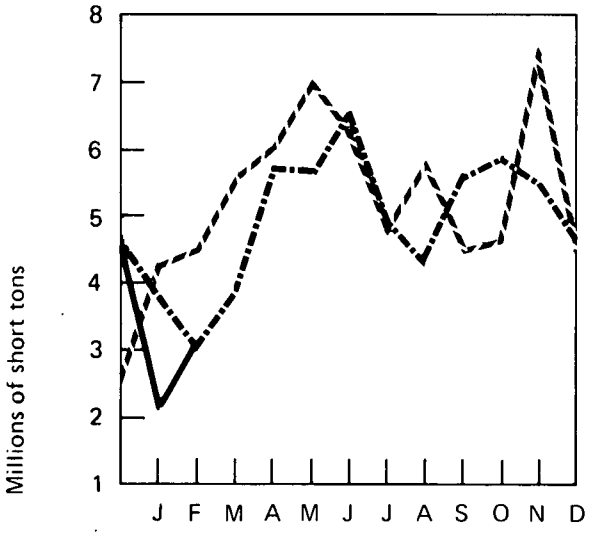
Domestic Consumption



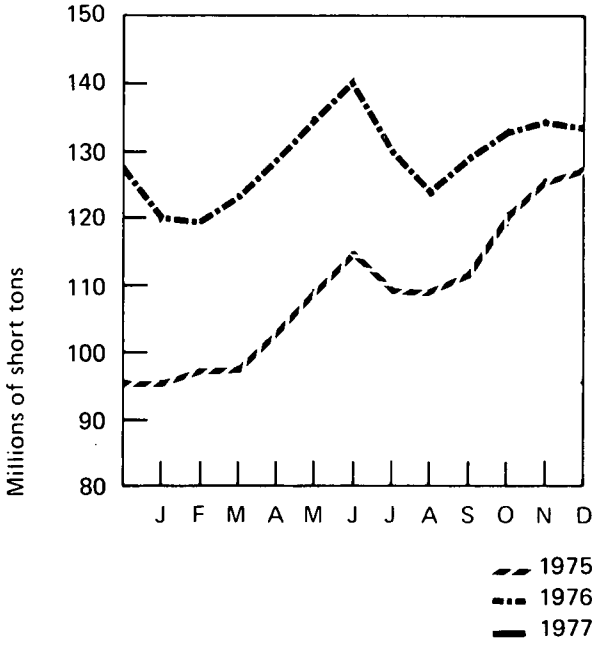
Production



Exports



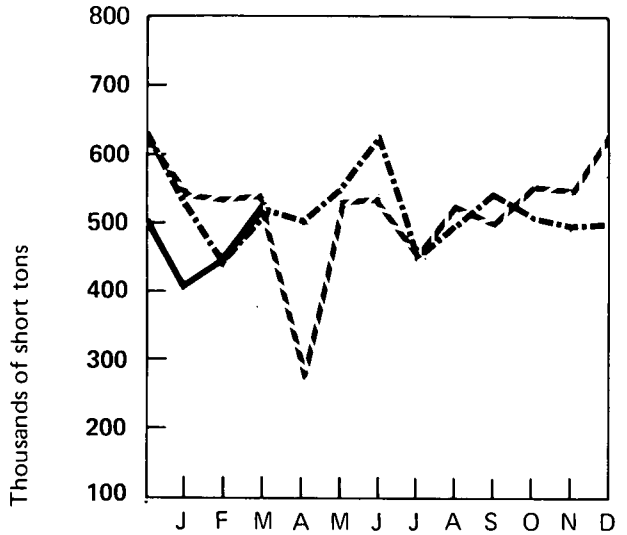
Stocks



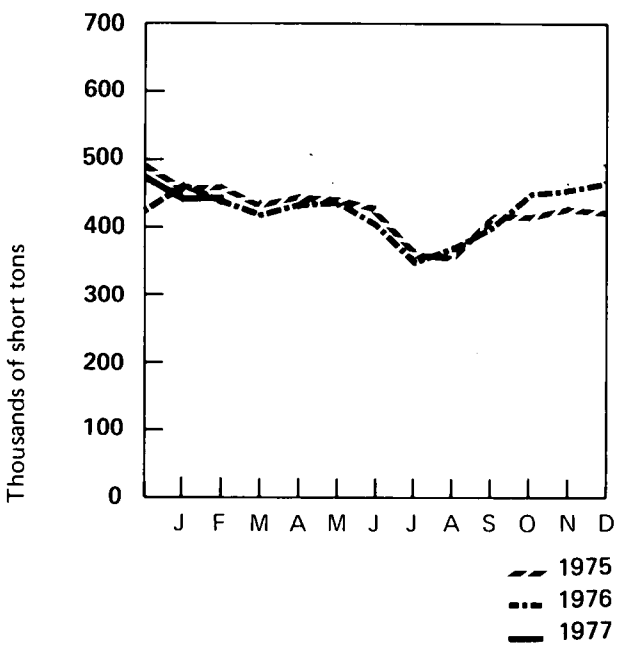
Anthracite

		Production	Apparent Domestic Consumption
		Thousands of short tons	
1972	**TOTAL**	**7,106**	**5,915**
1973	**TOTAL**	**6,830**	**5,671**
1974	**TOTAL**	**6,617**	**5,448**
1975	January	540	459
	February	535	465
	March	544	435
	April	270	450
	May	535	445
	June	544	430
	July	455	360
	August	535	356
	September	500	425
	October	560	420
	November	555	435
	December	630	428
	TOTAL	**6,203**	**5,108**
1976	January	530	460
	February	440	430
	March	530	420
	April	500	435
	May	555	440
	June	630	400
	July	450	350
	August	500	375
	September	550	400
	October	510	455
	November	500	460
	December	505	475
	TOTAL	**6,200**	**5,100**
1977	January	R400	R440
	February	R450	R450
	March	530	NA
	TOTAL	**1,380** (3 months)	**890** (2 months)

Production



Apparent Domestic Consumption



R=Revised data.
NA=Not available.
Source: Bureau of Mines.

Part 5 Electric Utilities

Electric Utilities

March 1977 production of electricity by utilities is estmated at 169.2 billion kilowatt hours, 3.1 percent above the level for March 1976. Total production during the first 3 months of 1977 is estimated at 528.9 billion kilowatt hours, 6.0 percent above the level for the same period in 1976.

Electric utility oil consumption during January 1977 was 35.1 percent higher than during January 1976, corresponding to the 34.6-percent increase in kilowatt-hour generation from oil. Electric utility coal consumption increased 8.2 percent while natural gas consumption declined 0.5 percent because of increased curtailments.

Sales of electricity to industrial customers during January 1977 totaled 60.3 billion kilowatt hours, 5.0 percent above the level for January 1976. Sales to commercial customers during the month totaled 39.1 billion kilowatt hours, up 12.3 percent. Sales to residential customers, at 64.5 billion kilowatt hours, were 7.4 percent higher.

The increase in sales to industrial customers occurred despite a 4.5-percent rise in the real price of electricity to these customers. The primary cause of the increase appears to be the 4.9-percent growth in industrial output during the period coupled with the 3.3-percent increase in the number of industrial electricity customers.

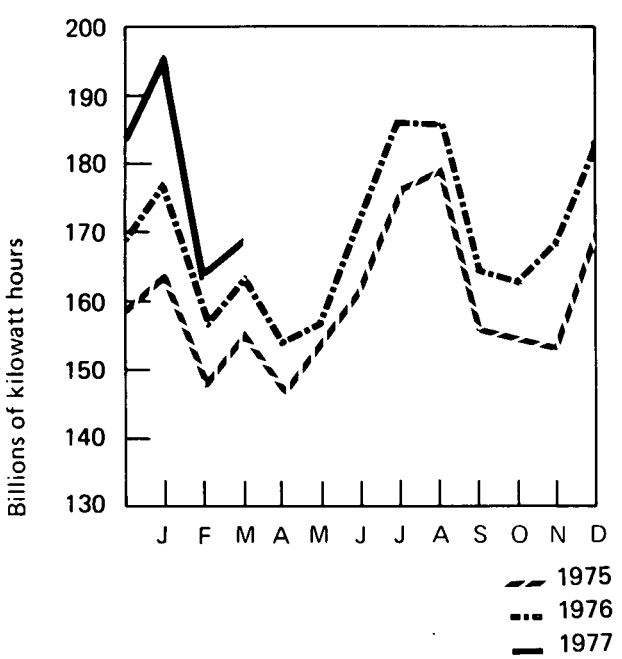
Sales of electricity to commercial customers were substantially greater because of a 1.9-percent increase in commercial electricity customers, increased activity in the services sector of the economy, and colder weather.

The increase in residential electricity sales appears to be due primarily to the 2.4-percent increase in the number of residential electricity customers and the unusually cold weather in early 1977.

Electric Utilities

		Total Net Production	Percentage Produced from Each Source					
		Millions of kilowatt hours	Coal	Oil	Gas	Nuclear	Hydro-electric	Other*
1972	**TOTAL**	**1,749,629**	**AVG. 44.2**	**15.6**	**21.4**	**3.1**	**15.6**	**0.1**
1973	**TOTAL**	**1,860,440**	**AVG. 45.7**	**16.8**	**18.3**	**4.5**	**14.6**	**0.1**
1974	**TOTAL**	**1,867,103**	**AVG. 44.5**	**16.0**	**17.2**	**6.1**	**16.1**	**0.1**
1975	January	164,325	45.6	18.6	12.0	8.5	15.2	0.1
	February	147,080	45.8	16.9	12.3	8.7	16.2	0.1
	March	155,481	44.5	14.9	12.9	9.6	18.0	0.1
	April	146,217	44.1	14.5	13.9	9.1	18.2	0.2
	May	153,231	42.2	13.7	16.8	9.0	18.1	0.2
	June	162,442	43.3	14.2	17.8	7.8	16.7	0.2
	July	176,815	43.2	14.2	19.3	8.7	14.4	0.2
	August	179,714	43.9	15.6	18.9	8.8	12.6	0.2
	September	155,223	44.2	13.8	19.3	9.3	13.2	0.2
	October	154,944	44.6	14.2	17.0	9.4	14.6	0.2
	November	152,794	46.1	14.1	14.3	9.3	16.0	0.2
	December	169,372	46.5	15.9	12.2	9.9	15.3	0.2
	TOTAL	**1,917,638**	**AVG. 44.5**	**15.1**	**15.6**	**9.0**	**15.6**	**0.2**
1976	January	178,313	46.9	18.1	11.2	9.0	14.6	0.2
	February	156,671	46.9	15.8	12.2	9.2	15.7	0.2
	March	R164,159	46.6	15.5	13.0	8.5	16.2	0.2
	April	R153,154	47.4	15.2	14.3	7.2	15.7	0.2
	May	157,354	46.1	13.8	16.1	7.6	16.2	0.2
	June	R173,370	44.4	14.5	17.1	9.1	14.7	0.2
	July	186,409	44.7	14.5	17.1	9.5	14.0	0.2
	August	186,380	45.2	R15.1	16.8	R9.9	12.8	0.2
	September	R165,006	45.7	14.3	17.0	10.5	12.3	0.2
	October	R163,709	R47.0	R14.8	14.6	10.6	R12.8	0.2
	November	R169,053	48.3	17.8	12.5	9.5	11.7	0.2
	December	R183,830	R47.4	18.6	R11.3	11.5	11.0	0.2
	TOTAL	**R2,037,408**	**R46.4**	**15.7**	**R14.4**	**9.4**	**13.9**	**0.2**
1977	January	R196,334	45.7	22.1	10.1	11.3	10.6	0.2
	February	163,385	NA	NA	NA	12.0	NA	NA
	March	169,230	NA	NA	NA	11.2	NA	NA
	TOTAL (3 months)	**528,949**						

Total Net Production



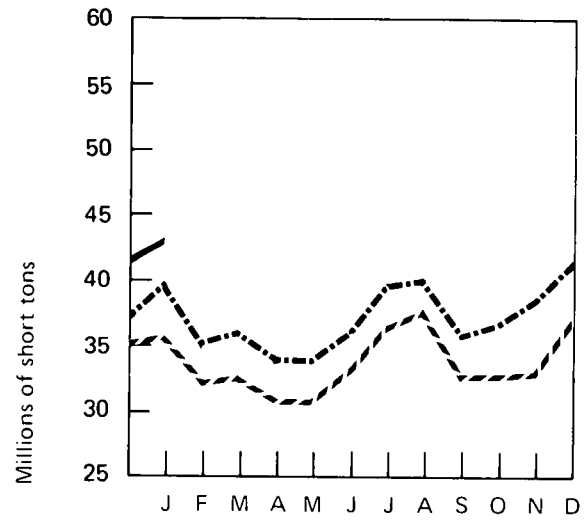
*Includes electricity produced from geothermal power, wood, and waste.
NA=Not available.
R=Revised.
Sources: Federal Power Commission; data for latest 2 months are from Edison Electric Institute and U.S. Nuclear Regulatory Commission.

Fuel Consumption

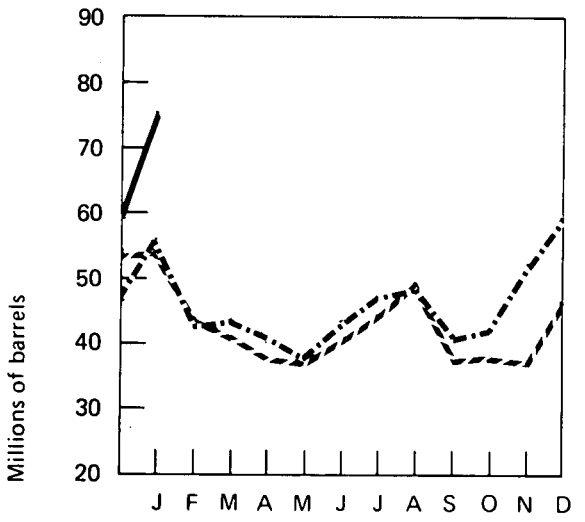
		Coal	Oil	Gas
		Thousands of short tons	Thousands of barrels	Millions of cubic feet
1972	**TOTAL**	**352,392**	**493,692**	**3,976,770**
1973	**TOTAL**	**389,707**	**560,146**	**3,659,388**
1974	**TOTAL**	**392,423**	**536,245**	**3,443,293**
1975	January	35,843	54,048	205,096
	February	32,097	43,544	188,922
	March	32,793	40,414	211,184
	April	30,547	37,037	214,250
	May	30,574	36,986	275,097
	June	33,456	40,943	307,901
	July	36,567	44,413	362,088
	August	37,967	49,320	360,199
	September	32,609	37,041	315,877
	October	32,853	38,030	275,266
	November	33,333	37,538	227,748
	December	37,390	46,814	213,957
	TOTAL	**406,029**	**506,128**	**3,157,585**
1976	January	39,986	56,081	206,359
	February	34,965	43,123	199,300
	March	36,099	43,949	222,605
	April	33,805	40,145	227,699
	May	33,944	R37,866	266,470
	June	36,381	R43,632	R313,143
	July	39,841	47,220	R337,371
	August	40,329	49,062	R329,493
	September	35,894	R40,761	R294,818
	October	36,775	R42,191	R249,738
	November	38,837	R52,299	R216,914
	December	R41,570	R59,482	R214,384
	TOTAL	**R448,426**	**R555,811**	**R3,078,294**
1977	January	43,250	75,774	205,388

R=Revised.
Source: Federal Power Commission.

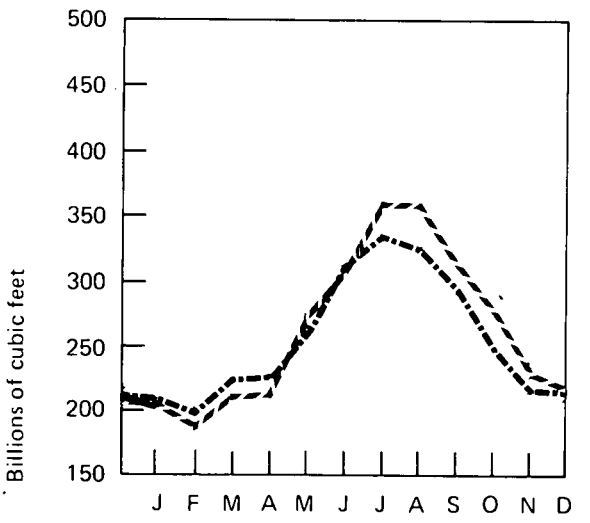
Coal Consumption



Oil Consumption



Gas Consumption

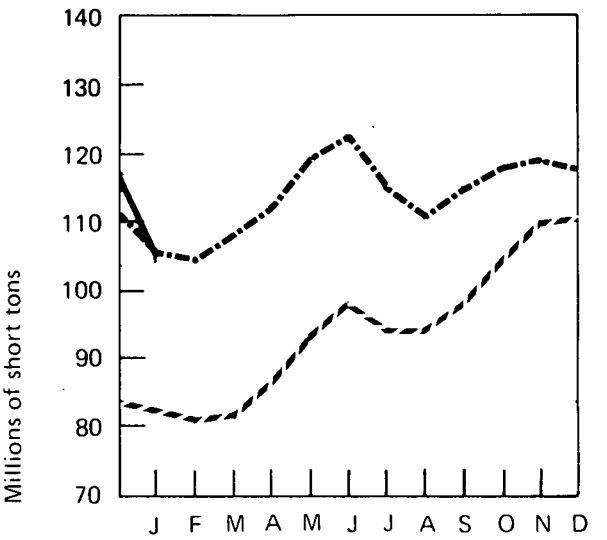


1975
1976
1977

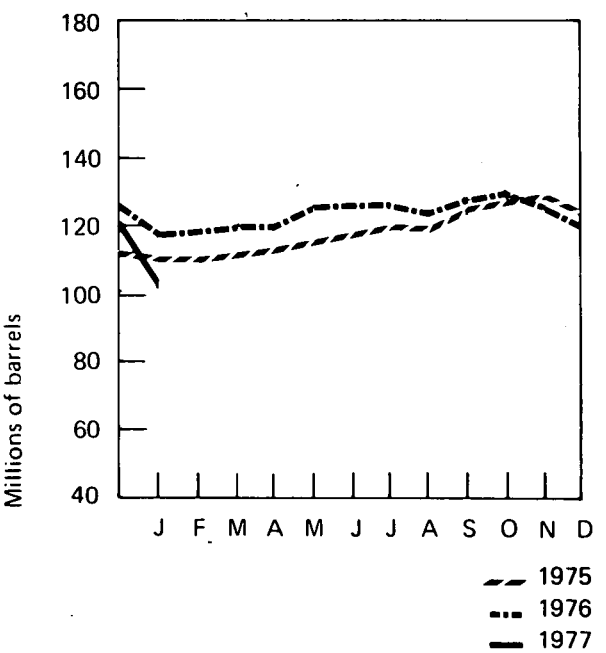
Electric Utilities (Continued)

		Stocks at End of Month	
		Coal	Oil
		Thousands of short tons	Thousands of barrels
1972		***100,009**	***57,653**
1973		***87,279**	***89,216**
1974		***83,542**	***112,916**
1975	January	82,088	111,295
	February	80,972	111,500
	March	81,885	113,643
	April	86,829	114,298
	May	93,869	117,231
	June	98,031	118,936
	July	94,278	121,239
	August	94,213	120,665
	September	98,096	126,314
	October	105,415	128,882
	November	110,313	130,341
	December	110,750	125,245
1976	January	105,518	R117,941
	February	104,874	R118,850
	March	108,450	R120,534
	April	112,862	R120,384
	May	119,611	R126,090
	June	123,048	R126,266
	July	115,204	R126,676
	August	110,752	R125,800
	September	115,399	R129,988
	October	118,566	R131,354
	November	119,298	R126,623
	December	R117,459	R121,707
1977	January	104,788	102,851

Coal Stocks



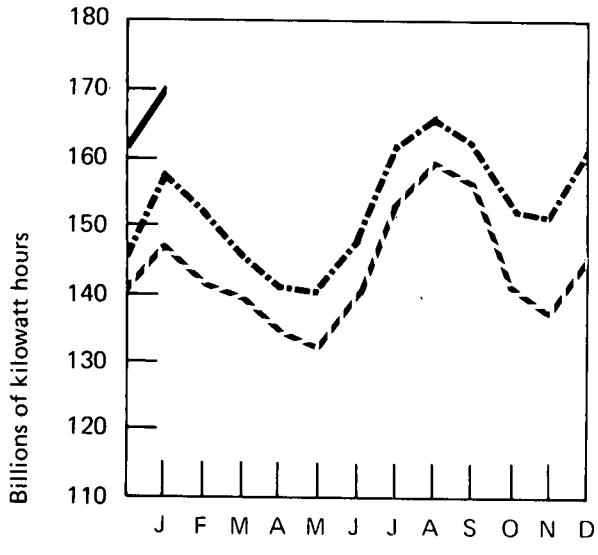
Oil Stocks



*As of December 31.
R=Revised.
Source: Federal Power Commission.

		Sales				
		Residential	Commercial	Industrial	Other*	Total
		Millions of kilowatt hours				
1972	**TOTAL**	**538,609**	**359,265**	**640,978**	**56,309**	**1,595,161**
1973	**TOTAL**	**579,231**	**388,266**	**686,085**	**59,326**	**1,712,909**
1974	**TOTAL**	**578,183**	**384,824**	**684,874**	**58,042**	**1,705,923**
1975	January	54,003	32,405	55,505	5,954	147,867
	February	50,219	31,459	54,328	5,544	141,550
	March	47,968	31,194	54,437	5,639	139,238
	April	44,762	30,473	53,910	5,269	134,414
	May	41,077	30,926	54,767	5,404	132,174
	June	45,766	35,210	55,369	5,384	141,729
	July	54,586	38,031	55,645	5,668	153,930
	August	57,291	38,576	57,868	5,709	159,444
	September	54,362	37,325	58,405	5,978	156,070
	October	45,142	33,329	56,486	5,194	140,151
	November	44,019	32,288	56,174	5,235	137,716
	December	51,900	33,183	55,532	5,357	145,972
	TOTAL	**591,095**	**404,399**	**668,426**	**66,335**	**1,730,255**
1976	January	60,091	34,833	57,448	6,380	158,752
	February	54,264	33,583	58,228	5,874	151,949
	March	47,060	32,273	60,516	5,990	145,839
	April	43,551	31,598	60,106	5,407	140,662
	May	41,036	32,347	61,271	5,478	140,132
	June	44,157	35,707	62,419	5,344	147,627
	July	54,314	39,455	62,877	5,895	162,541
	August	57,256	39,517	64,184	5,835	166,792
	September	53,460	38,503	64,333	6,134	162,430
	October	47,296	36,667	62,371	5,873	152,207
	November	48,582	35,760	61,511	5,977	151,830
	December	56,893	36,916	61,956	6,084	161,849
	TOTAL	**607,960**	**427,159**	**737,220**	**70,271**	**1,842,610**
1977	January	64,516	39,133	60,314	6,314	170,277

Total Sales



*Includes street lighting and trolley cars.
R=Revised.
Source: Federal Power Commission; data for latest 4 months from Edison Electric Institute.

Nuclear Power

The 59 domestic reactors in commercial operation, with a maximum dependable capacity of 41,206 megawatts, performed at 62 percent of capacity during March. This was a reduction from the previous 3-month winter period during which reactors performed at better than 70 percent of capacity. In March 1976, by comparison, reactors operated at 54 percent of capacity after a 3-month continuous operating level of over 63 percent. Such reductions generally occur in the spring and autumn when utilities refuel their reactors prior to the large summer and winter demands for electric power. Twelve reactors were refueling for the major part of March, and an additional eight units are scheduled for similar services in April.

Two boiling water reactors (BWR) and one pressurized water reactor (PWR) attained commercial status during the month. The BWR's were Browns Ferry 3, a 1,065-megawatt unit operated by the Tennessee Valley Authority, and Brunswick 1, an 821-megawatt unit operated by the Carolina Power and Light Company in Wilmington. The PWR was the Baltimore Gas and Electric Company's 845-megawatt Calvert Cliffs 2 unit located on the Chesapeake Bay. In addition, the Nuclear Regulatory Commission (NRC) indicated in a revised report that Beaver Valley 1, an 852-megawatt PWR operated by the Duquesne Light Company of Pennsylvania, achieved commercial status in October 1976. The data presented in this issue have been revised to reflect these status changes.

On March 25, the NRC awarded a permit to the Gulf States Utilities Company of Louisiana for construction of two 934-megawatt BWR's, River Bend 1 and 2. The units are scheduled for service in 1983 and 1985, respectively.

Several nuclear powerplant cancellations were announced in March. Florida Power and Light Company cancelled South Dade 1 and 2, each a 1,150-megawatt PWR, because of lack of financing and uncertainty in future electricity demand growth. For similar reasons, the Virginia Electric and Power Company (VEPCO) cancelled Surry units 3 and 4 at its existing dual-unit facility on the James River. This cancellation is of particular interest because the utility had received a license to construct units 3 and 4 in December 1974, and some $53 million had already been expended on the project. The company will be liable for an additional $93 million in penalty costs arising from contract cancellations. VEPCO proposes to amortize these costs in their rate base over the next 10 years, subject to regulatory commission approval.

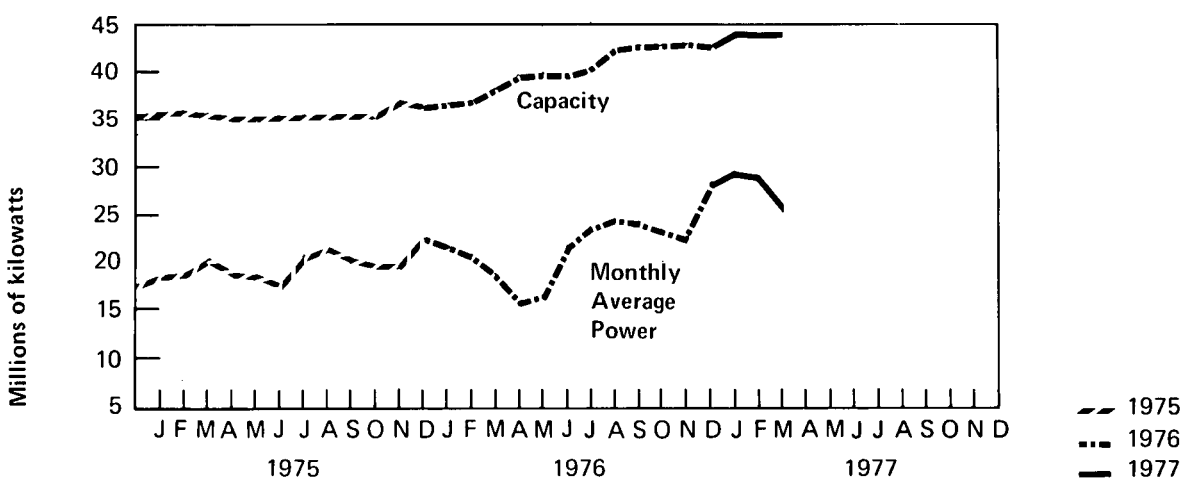
The Administration has effected a formal pause in domestic programs for spent fuel reprocessing, recycling, and the development of the plutonium fast breeder reactor in an effort to discourage international proliferation of nuclear weapons. A premise of this policy is that some 3.7 million tons of domestic uranium resources are economically available to fuel as much as 600,000 megawatts of reactor capacity.* Other estimates place the economically available resources at 1.8 million tons, which would restrict U.S. nuclear generating capacity to 300,000 megawatts. (The 1.8-million-ton estimate is technically referred to as the "prudent resource planning base.") Currently, plants with some 230,000 megawatts of capacity are 1) operating, 2) under construction, or 3) planned for operation by about 1995. Thus, exhaustion of the prudent resource planning base could occur early in the next century. Reprocessing and breeder advocates estimate that the deployment of large numbers of plutonium breeder reactors could extend uranium resources by as much as 60 times, and thus fuel the Nation's reactors far into the future.

*It is assumed that a 1,000-megawatt light-water reactor will require 6,000 tons of uranium for a 30-year life.

U.S. Nuclear Powerplant Operations*

		Maximum Dependable Capacity	Average Power	Percent of Total Domestic Electricity Generation
		Thousands of net kilowatts		
1972	**AVERAGE**	**7,726**	**6,174**	**3.1**
1973	**AVERAGE**	**13,850**	**8,760**	**4.5**
1974	**AVERAGE**	**29,921**	**13,011**	**6.1**
1975	January	35,691	18,734	8.5
	February	35,899	18,948	8.7
	March	35,686	20,003	9.6
	April	35,017	18,510	9.1
	May	35,017	18,500	9.0
	June	35,322	17,701	7.8
	July	35,596	20,661	8.7
	August	35,589	21,344	8.8
	September	35,540	19,994	9.3
	October	35,540	19,659	9.4
	November	36,752	19,672	9.3
	December	36,424	22,418	9.9
	AVERAGE	**35,671**	**19,692**	**9.0**
1976	January	36,750	21,638	9.0
	February	36,879	20,657	9.2
	March	38,072	R18,808	8.5
	April	39,763	R15,142	7.2
	May	39,902	16,034	7.6
	June	39,781	21,885	9.1
	July	40,168	23,802	9.5
	August	42,067	24,681	R9.9
	September	42,896	24,014	10.5
	October	42,877	23,327	10.6
	November	43,673	22,408	9.5
	December	42,877	28,380	11.5
	AVERAGE	**40,642**	**21,756**	**9.4**
1977	January	44,316	R29,715	11.3
	February	44,282	**29,233	**12.0
	March	**44,289	**26,208	**11.5
	AVERAGE (3 months)	**44,296**	**28,357**	**11.6**

U.S. Nuclear Powerplants



*Includes all units licensed to operate, whether in commercial operation or power ascension status.
**Preliminary data.
R=Revised data.
Sources: Average Power for latest 2 months and Capacity are from U.S. Nuclear Regulatory Commission; Percent of Total Domestic Electricity Generation for latest 2 months is based on data from Edison Electric Institute; remaining data are from Federal Power Commision.

Status of Nuclear Powerplants – March 31, 1977

Status	Number of Plants					Design Capacity
	Boiling Water Reactors	High Temperature Gas Reactors	Pressurized Water Reactors	Other*	Total	Net Electrical Megawatts
Licensed to operate	25	1	37	0	63	45,000
Construction permit granted	22	0	49	0	71	75,000
Construction permit pending	19	0	43	4	66	75,000
Orders placed for plant	3	0	8	0	11	13,000
Publicly announced	–	–	–	19	19	23,000
TOTAL	**69**	**1**	**137**	**23**	**230**	**231,000**

*Includes 1 Liquid Metal Fast Breeder Reactor and 22 announced intentions to order for which a reactor type has not been chosen.
Source: U.S. Nuclear Regulatory Commission.

U.S. Uranium Enrichment – March 1977

	Domestic Customers	Foreign Customers	Total
Separative Work Performed (in metric tons of separative work units)	484.223	347.569	831.792
Cost (in millions of dollars)	33.742	22.408	56.150
Product Quantity (in metric tons of uranium)	137.701	92.137	229.838
Feed Requirement (in metric tons of uranium)	654.330	459.435	1,113.765

Source: U.S. Energy Research and Development Administration.

Nuclear Power Generation by Major Non-Communist Countries – March 1977

Country	Number of Reactors*	Capacity	Generation of Electricity				
			Generation	Percent of Design Capacity			
			February	March	Year**		
					1974	1975	1976
		Thousands of gross electrical kilowatts	Millions of gross kilowatt hours				
Canada	7	3,930	2,297	79	74	64	85
Federal Republic of Germany	10	6,410	3,656	77	57	72	68
France	10	3,070	1,517	66	57	68	58
Great Britain	***27	7,320	4,099	75	61	57	64
India	3	620	270	58	55	46	58
Italy	3	630	410	87	61	69	69
Japan	13	7,430	1,681	30	61	36	57
Spain	3	1,120	642	77	75	77	77
Sweden	6	3,880	1,713	59	20	44	55
Switzerland	3	1,060	783	99	76	84	86
United States	61	44,910	21,217	64	57	60	56
TOTAL	**146**	**80,380**	**38,285**	**64**	**58**	**58**	**60**

*Includes only operational units, i.e., those which have generated electricity during, or prior to, the current month.
**Averages are computed for those units in operation on January 1 of each year.
***Information for Calder Hall (240 megawatts) not available; figures are for 5-week period.
Source: *Nucleonics Week.*

Summary of Monthly Fuel Cycle – February 1977

Fuel Cycle Activity	Product	Processed Material*	Percent Utilization of Industry Capacity	Energy Content of Processed Material**	Energy Consumed in Fuel Cycle Activity***	Cost Contribution to Electric Power†
		MTU except where noted		Billion Btu		Mills per kilowatt hour
Milling	Yellowcake (U_3O_8) Deliveries	690	61	237,000	392	1.27
Conversion	Uranium Hexafluoride (UF_6) Deliveries	1,047	72	363,000	226	0.16
Enrichment	Enriched UF_6 Deliveries	29 (76 MT-SWU)	††	60,000	707	1.53
Fabrication	Finished Fuel Assemblies Shipped	51	21	10,000	7	0.47
Powerplant Operation	Electricity Generated	20,160 (million kWhe)	67	190,000	925 (million kWhe)	10.93
	Spent Fuel Discharged	10	–	–	–	
Reprocessing	Spent Fuel Received	0	–	–	–	†††1.57
	Spent Fuel Reprocessed	0	–	–	–	

*Units of measure are discussed in Explanatory Notes 10 and 11.
**Assumes 25,000 MWD/MTU for heat content of enriched uranium and a 6.1 feed to product ratio at the enrichment plant.
***Energy requirements for processing are obtained from U.S.A.E.C. Report No. WASH 1248.
†Cost contribution is computed from unit prices paid for current month's production and requirement for a model 1000 MWe reactor operating at 65 percent capacity factor. Because of the long lead time required for nuclear fuel processing, the sum of numbers in this column does not necessarily reflect the fuel cost of current electricity production.
††ERDA's enrichment plants are presently operating at maximum utilization of available electric power, with the excess production being placed in the "Preproduction stockpile" in anticipation of high demand for enriched uranium in the 1980's.
†††Figure represents current industry estimate for cost of spent fuel shipment, reprocessing, and waste disposition, exclusive of cost credits for recovered uranium and plutonium.
NA=Not available.
Source: ERDA.

Energy Consumption

Domestic energy consumption in February 1977 was 6.39 quadrillion Btu, or an average of 228 trillion Btu per day. This was 7.9 percent more than average daily consumption in February 1976 and 5.6 percent more than in February 1975. The sectoral breakout for February is not yet available.

The consumption results for 1976 published last month have been revised noticeably in this issue. Estimated coal consumption has increased by approximately 0.7 percent, and there has been a change in the methodology used to distribute petroleum consumption between the combined residential/commercial sector and the industrial sector. (The new methodology is based on percentage shares computed from 1974, 1975, and 1976 Bureau of Mines data.) This change in methodology shifts approximately 0.21 quadrillion Btu of 1976 petroleum consumption from the residential/commercial sector to the industrial sector, amounting to about a 3-percent change in petroleum consumption for each of these sectors.

Revised total consumption for 1976 is 74.21 quadrillion Btu, up 5.2 percent from 1975 and up 2.2 percent from 1974. It is only 0.5 percent less than the record high established in 1973.

The revised 1976 total for the combined residential/commercial sector is 27.32 quadrillion Btu, 4.3 percent more than for 1975 and 5.7 percent more than for 1974. For the industrial sector, 1976 consumption is 27.63 quadrillion Btu. This is 6.2 percent above 1975 consumption, but 3.0 percent below the 1974 level. Energy used for transportation in 1976 is 19.27 quadrillion Btu, 4.9 percent more than in 1975 and 5.5 percent more than in 1974.

Petroleum Consumption and Forecast

Total domestic demand for petroleum products during March 1977 was 17.9 million barrels per day. This was 2.8 percent above the forecast level, 3.2 percent above the March 1976 level, and 9.5 percent above the level for March 1975.

The largest increase was in residual fuel oil. Consumption was 3.2 million barrels per day, 13.9 percent above the forecast level, 14.9 percent above the March 1976 level, and 19.6 percent above that for March 1975. Consumption of distillate was 3.5 million barrels per day, 1.5 percent below the forecast level but 4.6 percent above the March 1976 figure and 6.0 percent above demand in March 1975. March 1977 was slightly warmer than March 1976 (national average distillate oil weighted heating degree-days were 0.6 percent lower). Therefore, the increased demand for distillate and residual was not due to colder weather, but probably reflects a buildup of secondary and consumer stocks (see "Crude Oil and Refined Petroleum Products").

Consumption of gasoline in March 1977 was 6.8 million barrels per day, 0.8 percent above the forecast level, 1.8 percent below March 1976 consumption, and 6.9 percent above March 1975 consumption.

Energy Consumption

Domestic Energy Consumption by Primary Energy Type

		Coal*	Natural Gas (dry)	Petroleum	Hydroelectric Power**	Nuclear Electric Power	Total	Cumulative Total
				Quadrillion (10^{15}) Btu				
1972	**TOTAL**	**12.424**	**22.984**	**32.965**	**2.946**	**0.567**	**71.895**	
1973	**TOTAL**	**13.294**	**22.512**	**34.852**	**3.006**	**0.888**	**74.553**	
1974	**TOTAL**	**12.889**	**21.732**	**33.468**	**3.295**	**1.215**	**72.600**	
1975	January	1.148	2.295	3.067	0.268	0.149	6.927	6.927
	February	1.054	1.980	2.629	0.256	0.136	6.054	12.982
	March	1.087	1.943	2.780	0.299	0.159	6.267	19.249
	April	1.004	1.608	2.646	0.285	0.142	5.685	24.934
	May	0.984	1.359	2.582	0.296	0.147	5.368	30.301
	June	1.032	1.283	2.574	0.290	0.136	5.315	35.616
	July	1.091	1.341	2.682	0.273	0.164	5.550	41.167
	August	1.131	1.398	2.693	0.243	0.169	5.634	46.800
	September	1.015	1.399	2.600	0.221	0.153	5.388	52.188
	October	1.035	1.576	2.790	0.243	0.156	5.801	57.989
	November	1.059	1.674	2.601	0.262	0.151	5.747	63.736
	December	1.174	2.092	3.098	0.278	0.178	6.821	70.557
	TOTAL	**12.813**	**19.948**	**32.742**	**3.215**	**1.839**	**70.557**	
1976	January	1.218	2.345	3.169	0.279	0.172	7.183	7.183
	February	1.078	1.861	2.778	0.263	0.153	6.133	13.316
	March	1.119	1.860	2.947	0.284	0.149	6.360	19.675
	April	R1.070	R1.521	2.749	0.259	0.117	R5.716	R25.391
	May	R1.072	1.464	2.722	0.273	0.127	R5.658	R31.049
	June	R1.115	1.355	2.776	0.273	0.168	R5.688	R36.737
	July	R1.188	1.374	2.830	0.279	0.189	R5.860	R42.596
	August	R1.197	1.355	2.835	0.256	0.196	R5.838	R48.435
	September	R1.099	R1.317	2.774	0.220	0.184	R5.594	R54.028
	October	1.134	1.645	2.905	0.227	0.185	6.096	R60.124
	November	1.182	R1.912	3.107	0.214	0.172	R6.587	R66.712
	December	1.281	R2.285	3.494	0.218	0.225	R7.502	R74.214
	TOTAL	**R13.752**	**R20.295**	**35.087**	**3.043**	**2.037**	**R74.214**	
1977	January***	R1.329	2.450	R3.484	R0.223	0.236	R7.723	R7.723
	February***	1.197	1.756	3.020	0.208	0.209	6.391	14.114
	TOTAL (2 months)	**2.526**	**4.206**	**6.504**	**0.431**	**0.445**	**14.114**	

*Includes bituminous coal, lignite, and anthracite coal.
**Includes utility production, industrial production, and net imports.
***Partially estimated.
Source: FEA.

Energy Consumption by Economic Sector and Primary Source – January 1977 [Quadrillion (10^{15}) Btu]

Sector[1]	Primary Energy Source					Primary Energy Consumption	Electricity Distributed[7]	Net Energy Consumption	Electrical Energy Loss Distributed[8]	Ultimate Energy Disposition
	Coal[2]	Natural Gas (dry)[3]	Petroleum[4]	Hydroelectric[5]	Nuclear[6]					
Residential and Commercial	0.036	1.353	0.712	–	–	2.101	0.369	2.470	0.943	3.413
Industrial	0.357	0.806	0.692	0.003	–	1.858	0.206	2.064	0.526	2.590
Transportation	0.001	0.081	1.617	–	(9)	1.699	0.006	1.705	0.016	1.720
Electric Utilities	0.935	0.211	0.463	0.221	0.236	2.066	–	–	–	–
TOTAL	**1.329**	**2.450**	**3.484**	**0.223**	**0.236**	**7.723**	**0.581**	**6.238**	**1.485**	**7.723**

[1] See Explanatory Note 12 for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

[2] Data are from the Bureau of Mines. Includes anthracite and bituminous coal and lignite.

[3] Aggregate data are from the Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. Data from the American Gas Association are used for the Residential and Commercial Sector, adjusted to include a portion of the AGA "Other" category. Natural gas used in transportation, mostly for pipeline use, is estimated to be 3.6 percent of total natural gas consumption less electric utilities. This percentage is derived from 1974, 1975, and 1976 Bureau of Mines data on consumption. The Industrial Sector is then the difference between the total and the sum of the other sectors.

[4] Aggregate petroleum data are from the Bureau of Mines. FPC provided data on oil consumed by electric utilities. Petroleum consumed in transportation was calculated based on Department of Transportation data as follows: Motor gasoline - 100 percent; naphtha jet fuel - 100 percent; kerosene jet fuel - 97 percent; distillate fuel oil - 30.3 percent; residual fuel oil - 11.2 percent; all other products - 4.7 percent. The remainder is distributed to economic sectors using the following percentage shares, derived from 1974, 1975, and 1976 Bureau of Mines data on consumption; Residential and Commercial - 50.7 percent; Industrial - 49.3 percent.

[5] FPC hydroelectric power production plus net imports of electricity. These imports are assumed to be from hydroelectric power sources and are estimated at 0.011 quadrillion Btu per month in 1974 and 0.005 quadrillion Btu per month for 1975 and 1976. Monthly industrial hydroelectric power consumption is estimated to be one-twelfth of the preliminary Bureau of Mines annual figure for 1976.

[6] FPC nuclear power production.

[7] Electricity was distributed using Edison Electric Institute data on kilowatt-hour sales to ultimate customers. Electrical energy consumed by railroads and for street and highway lighting was distributed to the Transportation Sector. All "Other" sales, largely for use in government buildings, were distributed to the Residential and Commercial Sector.

[8] In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs of the utility industry. In order to fully account for all energy consumed both directly and indirectly (i.e., ultimate energy disposition), the electricity losses are allocated to the final end-use sectors in proportion to their direct kilowatt-hour usage.

[9] Negligible.

Energy Consumption (Continued)

Percent Changes in Energy Consumption for January 1977 by Sources and Economic Sectors

	January 1977 Consumption	Percent Change from January 1977
	Quadrillion Btu	
Refined Petroleum Products	3.484	+10.0
Motor Gasoline	1.052	+1.1
Jet Fuel	0.183	+10.9
Distillate	0.917	+18.1
Residual	0.716	+19.8
Other Petroleum Products	0.616	+7.6
Natural Gas (Dry)	2.450	+4.5
Coal (Anthracite, bituminous, and lignite)	1.329	+9.1
Hydroelectric and Nuclear Electric Power	0.459	+1.8
TOTAL ENERGY USE	**7.723**	**+7.5**
Economic Sector Consumption		
Residential and Commercial	3.413	+10.5
Industrial	2.590	+5.1
Transportation	1.720	+5.6

Energy Consumption by the Residential and Commercial Economic Sector[1]

		Coal	Natural Gas (dry)	Petroleum[2]	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
				Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**0.295**	**7.577**	**7.077**	**3.445**	**8.120**	**26.515**	
1974	**TOTAL**	**0.297**	**7.427**	**R6.484**	**3.424**	**8.222**	**R25.853**	
1975	January	0.035	1.124	R0.627	0.310	0.748	R2.845	R2.845
	February	0.023	1.105	R0.526	0.292	0.637	R2.585	R5.427
	March	0.022	1.018	R0.546	0.284	0.684	R2.554	R7.981
	April	0.015	0.905	R0.489	0.270	0.623	R2.302	R10.283
	May	0.012	0.522	R0.444	0.267	0.673	R1.917	R12.200
	June	0.013	0.338	R0.435	0.297	0.747	R1.830	R14.031
	July	0.016	0.294	R0.463	0.331	0.844	R1.947	R15.978
	August	0.015	0.267	R0.447	0.342	0.855	R1.926	R17.904
	September	0.021	0.281	R0.484	0.328	0.673	R1.786	R19.690
	October	0.023	0.353	R0.539	0.280	0.669	R1.863	R21.554
	November	0.024	0.523	R0.503	0.273	0.651	R1.974	R23.527
	December	0.033	0.910	R0.635	0.303	0.770	R2.651	R26.179
	TOTAL	**0.255**	**7.640**	**R6.135**	**3.576**	**8.572**	**R26.179**	
1976	January	0.031	1.229	R0.656	0.340	0.832	R3.088	R3.088
	February	0.020	1.106	R0.575	0.314	0.678	R2.693	R5.781
	March	0.018	0.858	R0.571	0.286	0.695	R2.428	R8.208
	April	R0.021	0.704	R0.500	0.270	R0.619	R2.114	R10.323
	May	R0.016	0.510	R0.506	0.267	R0.638	R1.937	R12.260
	June	R0.015	0.369	R0.489	0.286	0.745	R1.904	R14.164
	July	R0.011	0.297	R0.487	0.335	R0.852	R1.983	R16.147
	August	R0.015	0.275	R0.506	0.345	R0.845	R1.986	R18.133
	September	R0.017	0.271	R0.517	0.329	0.700	R1.835	R19.968
	October	0.020	0.397	R0.567	0.301	R0.695	R1.980	R21.948
	November	0.025	0.700	R0.622	0.302	R0.722	R2.371	R24.319
	December	0.037	1.078	R0.726	0.335	0.824	R3.000	R27.319
	TOTAL	**R0.246**	**7.796**	**R6.722**	**3.711**	**R8.845**	**R27.319**	
1977	January	0.036	1.353	0.712	0.369	0.943	3.413	

(See footnotes on page 49)

Energy Consumption (Continued)

Energy Consumption by the Industrial Economic Sector[1]

		Coal	Natural Gas (dry)	Petroleum[3]	Hydro-electric	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
					Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**4.370**	**10.493**	**6.403**	**0.036**	**2.341**	**5.518**	**29.161**	
1974	**TOTAL**	**4.062**	**R10.137**	**R6.305**	**0.036**	**2.337**	**5.609**	**R28.486**	
1975	January	0.341	R0.887	R0.610	0.003	0.189	0.458	R2.489	R2.489
	February	0.342	R0.619	R0.511	0.003	0.185	0.404	R2.064	R4.553
	March	0.362	R0.648	R0.531	0.003	0.186	0.447	R2.176	R6.729
	April	0.340	R0.433	R0.475	0.003	0.184	0.425	R1.861	R8.590
	May	0.321	R0.516	R0.431	0.003	0.182	0.460	R1.913	R10.503
	June	0.299	R0.595	R0.423	0.003	0.185	0.463	R1.967	R12.470
	July	0.286	R0.640	R0.450	0.003	0.190	0.485	R2.053	R14.523
	August	0.291	R0.724	R0.435	0.003	0.197	0.493	R2.143	R16.666
	September	0.292	R0.755	R0.470	0.003	0.199	0.408	R2.128	R18.795
	October	0.303	R0.895	R0.524	0.003	0.193	0.460	R2.377	R21.171
	November	0.316	R0.865	R0.489	0.003	0.192	0.457	R2.322	R23.493
	December	0.334	R0.895	R0.617	0.003	0.189	0.482	R2.521	R26.014
	TOTAL	**3.826**	**R8.473**	**R5.966**	**0.035**	**2.272**	**5.442**	**R26.014**	
1976	January	0.320	R0.828	R0.638	0.003	0.196	0.480	R2.465	R2.465
	February	0.302	R0.491	R0.559	0.003	0.199	0.429	R1.982	R4.448
	March	0.321	R0.715	R0.555	0.003	0.206	0.502	R2.302	R6.750
	April	R0.320	R0.537	R0.487	0.003	0.205	R0.471	R2.022	R8.772
	May	R0.327	R0.638	R0.492	0.003	0.209	0.499	R2.168	R10.939
	June	R0.312	R0.627	R0.475	0.003	0.213	R0.554	R2.184	R13.123
	July	R0.310	R0.694	R0.473	0.003	0.215	0.546	R2.240	R15.364
	August	R0.304	R0.705	R0.492	0.003	0.219	0.537	R2.259	R17.623
	September	0.303	R0.707	R0.503	0.003	0.220	0.466	R2.201	R19.825
	October	0.318	R0.941	R0.551	0.003	0.213	0.491	R2.517	R22.342
	November	0.327	R0.929	R0.605	0.003	0.210	0.501	R2.574	R24.916
	December	0.357	R0.913	R0.706	0.003	0.211	0.520	R2.710	R27.626
	TOTAL	**R3.821**	**R8.725**	**R6.537**	**0.033**	**2.515**	**R5.995**	**R27.626**	
1977	January	0.357	0.806	0.692	0.003	0.206	0.526	2.590	

(See footnotes on page 49)

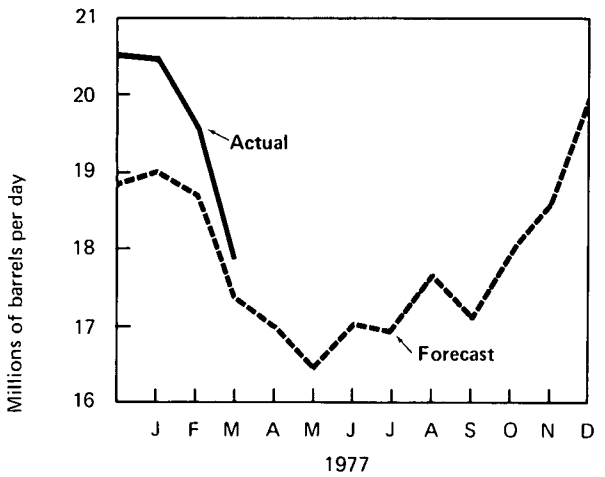
Energy Consumption by the Transportation Economic Sector[1]

		Coal	Natural Gas[4] (dry)	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
				Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**0.009**	**0.733**	**17.940**	**0.058**	**0.137**	**18.877**	
1974	**TOTAL**	**0.009**	**R0.656**	**17.392**	**0.060**	**0.144**	**R18.261**	
1975	January	0.001	R0.075	1.499	0.006	0.013	R1.594	R1.594
	February	0.001	R0.064	1.325	0.005	0.012	R1.408	R3.002
	March	0.001	R0.062	1.456	0.005	0.013	R1.537	R4.538
	April	0.001	R0.050	1.455	0.005	0.012	R1.523	R6.061
	May	0.001	R0.039	1.481	0.005	0.012	R1.537	R7.598
	June	0.001	R0.035	1.465	0.005	0.011	R1.517	R9.115
	July	0.001	R0.035	1.497	0.005	0.012	R1.550	R10.665
	August	0.001	R0.037	1.510	0.005	0.012	R1.564	R12.230
	September	0.001	R0.039	1.419	0.005	0.010	R1.474	R13.704
	October	0.001	R0.047	1.495	0.005	0.013	R1.561	R15.264
	November	0.001	R0.052	1.380	0.006	0.013	R1.452	R16.716
	December	0.001	R0.067	1.560	0.006	0.015	R1.649	R18.364
	TOTAL	**0.008**	**R0.602**	**17.544**	**0.062**	**0.149**	**R18.364**	
1976	January	0.001	R0.077	1.532	0.006	0.015	R1.630	R1.630
	February	0.001	R0.060	1.380	0.006	0.012	R1.457	R3.087
	March	0.001	R0.059	1.552	0.005	0.013	R1.630	R4.717
	April	0.001	0.046	1.516	0.005	0.012	R1.580	R6.297
	May	0.001	R0.043	1.493	0.005	0.012	R1.553	R7.850
	June	0.001	R0.037	1.545	0.005	0.012	R1.599	R9.450
	July	0.001	R0.037	1.581	0.005	0.012	R1.636	R11.086
	August	0.001	R0.037	1.538	0.005	0.013	R1.593	R12.679
	September	0.001	R0.037	1.504	0.005	0.011	R1.558	R14.236
	October	0.001	R0.050	1.530	0.006	0.013	R1.599	R15.835
	November	0.001	R0.061	1.561	0.006	0.014	R1.642	R17.476
	December	0.001	R0.074	1.697	0.006	0.014	R1.792	R19.269
	TOTAL	**R0.008**	**R0.617**	**18.428**	**0.064**	**0.152**	**R19.269**	
1977	January	0.001	0.081	1.617	0.006	0.016	1.720	1.720

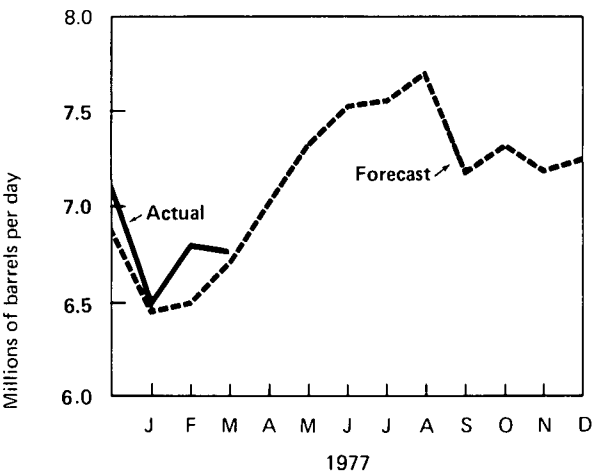
[1] See Explanatory Note 12 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculation is provided in the footnotes of the previous table. Printed totals may differ slightly from the sum of their row/column components due to independent rounding.
[2] The percentage share used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 50.7 percent for 1974, 1975, 1976, and 1977.
[3] The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 49.3 percent for 1974, 1975, 1976, and 1977.
[4] The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.6 percent for 1974, 1975, 1976, and 1977.
R=Revised data.

Petroleum Consumption and Forecast

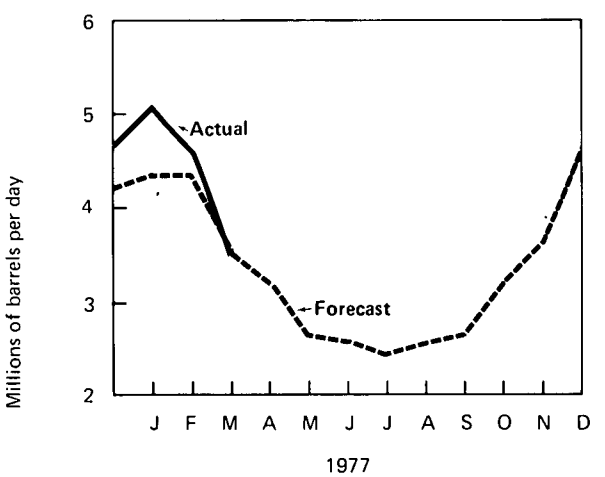
Total Domestic Demand for Petroleum Products



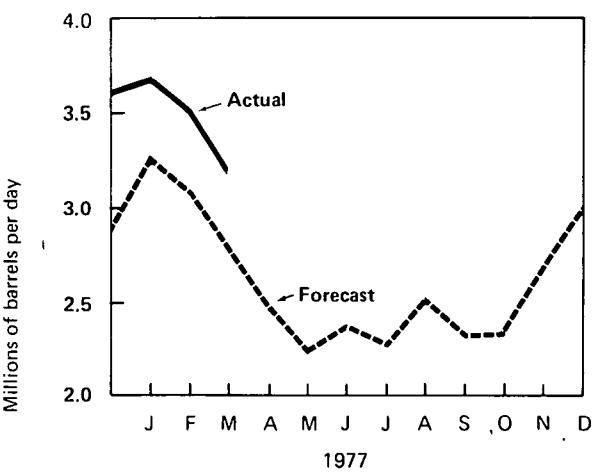
Domestic Demand for Motor Gasoline



Domestic Demand for Distillate Fuel Oil



Domestic Demand for Residual Fuel Oil



Notes:

Domestic Demand – Demand for products, in terms of real consumption, is not available; production plus imports plus withdrawals from primary stocks is used as a proxy for consumption. Secondary stocks, not measured by BOM and API, are substantial for some products.

Actuals – Based on Bureau of Mines data for December 1976 and January 1977, FEA data for February 1977, and API data for March 1977.

Forecast – See Explanatory Note 6 for discussion of basic assumptions for forecast.

Part 8

Resource Development

Oil and Gas Exploration and Development

Oil and gas rotary drilling rig activity was at an 18-year high in April with 1,907 rigs in use. This is almost double the pre-embargo April 1973 rig count of 993, and is 29 percent greater than the count for last April.

March well completions were up following a 5-month period of decline. A total of 4,072 exploratory and development wells were drilled during the month, 6 percent more than in March 1976 and 32 percent more than in March 1975.

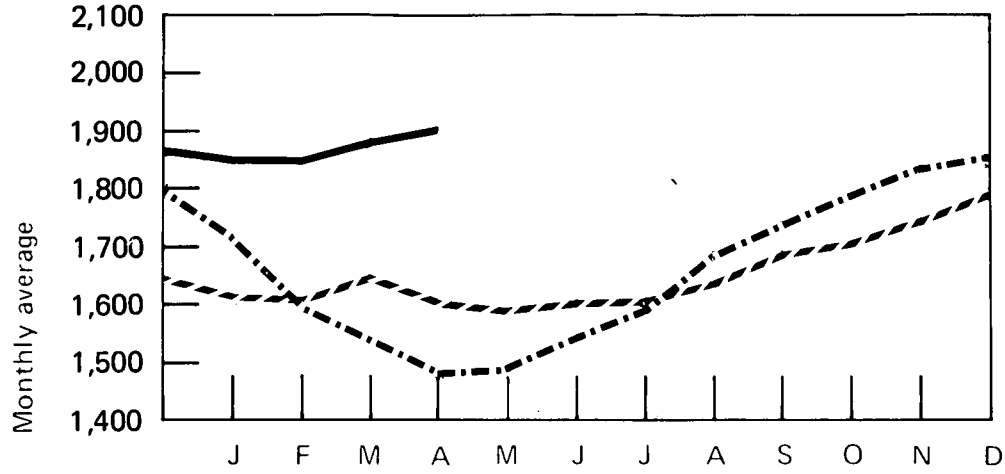
The number of applications for drilling permits is a good leading indicator of oil and gas well drilling activity. Commencement of drilling operations generally lags permit applications by about 2 months. Drilling permit application data are readily available for Texas, which accounted for 39 percent of the domestic rotary rig activity last year and 35 percent of the footage drilled. During the first 3½ months of 1977, the number of applications for permission to drill oil and gas tests in that State was up 23 percent from the number applied for during the same period in 1976.

Oil and Gas Exploration and Development

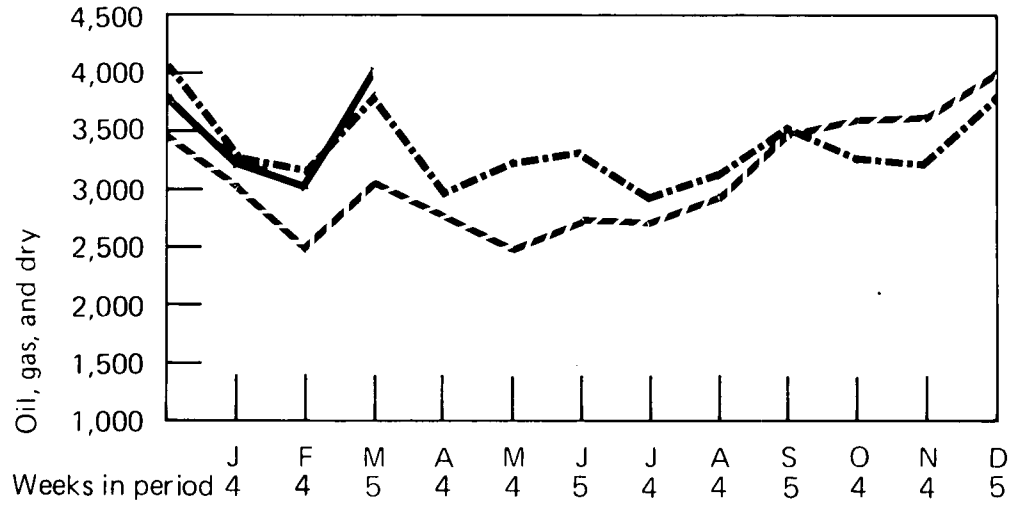
		Rotary Rigs in Operation		Exploratory and Development Wells Drilled*				Total Footage of Wells Drilled
		Monthly average		Oil	Gas	Dry	Total	Thousands of feet
1972	**AVERAGE**	**1,107**	**TOTAL**	**11,306**	**4,928**	**11,057**	**27,291**	**134,602**
1973	**AVERAGE**	**1,194**	**TOTAL**	**9,902**	**6,385**	**10,305**	**26,592**	**136,391**
1974	**AVERAGE**	**1,475**	**TOTAL**	**12,784**	**7,240**	**11,674**	**31,698**	**150,551**
1975	January	1,615		1,299	655	1,040	2,994	13,189
	February	1,611		1,097	458	933	2,488	12,071
	March	1,651		1,341	658	1,091	3,090	15,472
	April	1,604		1,181	506	1,071	2,758	13,545
	May	1,592		1,100	451	891	2,442	12,054
	June	1,613		1,246	509	1,022	2,777	13,540
	July	1,616		1,229	557	920	2,706	12,545
	August	1,645		1,272	587	1,122	2,981	14,221
	September	1,699		1,504	831	1,165	3,500	15,636
	October	1,716		1,633	682	1,310	3,625	16,689
	November	1,757		1,619	776	1,270	3,665	15,788
	December	1,793		1,817	832	1,424	4,073	17,556
	AVERAGE	**1,660**	**TOTAL****	**16,408**	**7,580**	**13,247**	**37,235**	**174,434**
1976	January	1,710		1,465	772	1,055	3,292	14,517
	February	1,594		1,341	652	1,159	3,152	14,888
	March	1,540		1,726	821	1,301	3,848	18,126
	April	1,480		1,237	672	994	2,903	13,765
	May	1,496		1,501	658	1,104	3,263	14,196
	June	1,546		1,500	709	1,123	3,332	14,780
	July	1,597		1,312	730	916	2,958	13,716
	August	1,691		1,265	711	1,140	3,116	14,697
	September	1,744		1,474	909	1,199	3,582	16,777
	October	1,794		1,396	750	1,123	3,269	14,542
	November	1,840		1,291	698	1,222	3,211	14,642
	December	1,860		1,512	926	1,414	3,852	17,093
	AVERAGE	**1,656**	**TOTAL****	**R17,059**	**R9,085**	**R13,621**	**R39,765**	**R181,780**
1977	January	1,850		1,391	732	1,096	3,219	14,517
	February	1,856		1,321	705	999	3,025	14,443
	March	1,887		1,817	958	1,297	4,072	19,400
	April	1,907						
	AVERAGE (4 months)	**1,874**	**TOTAL**** (3 months)	**4,529**	**2,395**	**3,392**	**10,316**	**48,360**

*Excludes service wells and stratigraphic and core tests.
**Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.
R=Revised data.
NA=Not available.
Sources: Rotary Rigs—Hughes Tool Company; Wells—American Petroleum Institute.

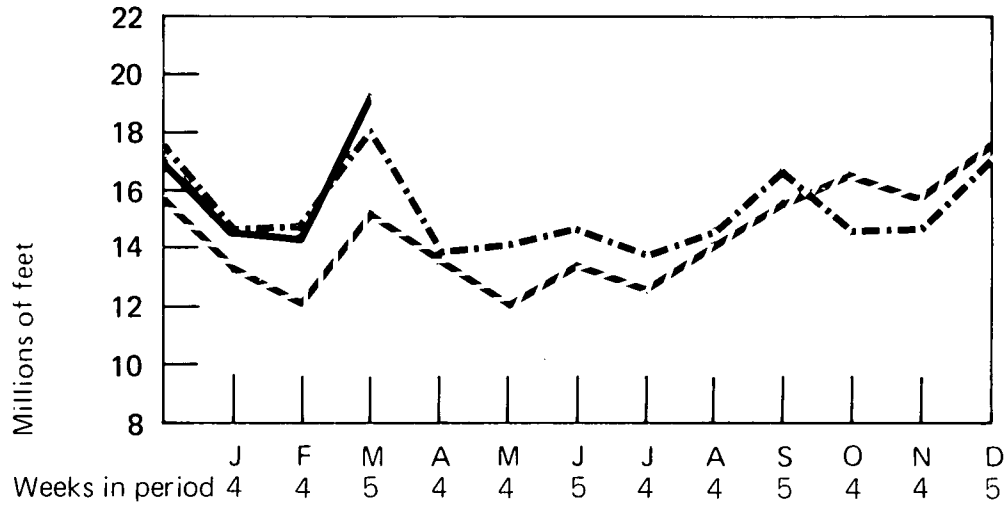
Rotary Rigs in Operation



Total Wells Drilled



Total Footage of Wells Drilled

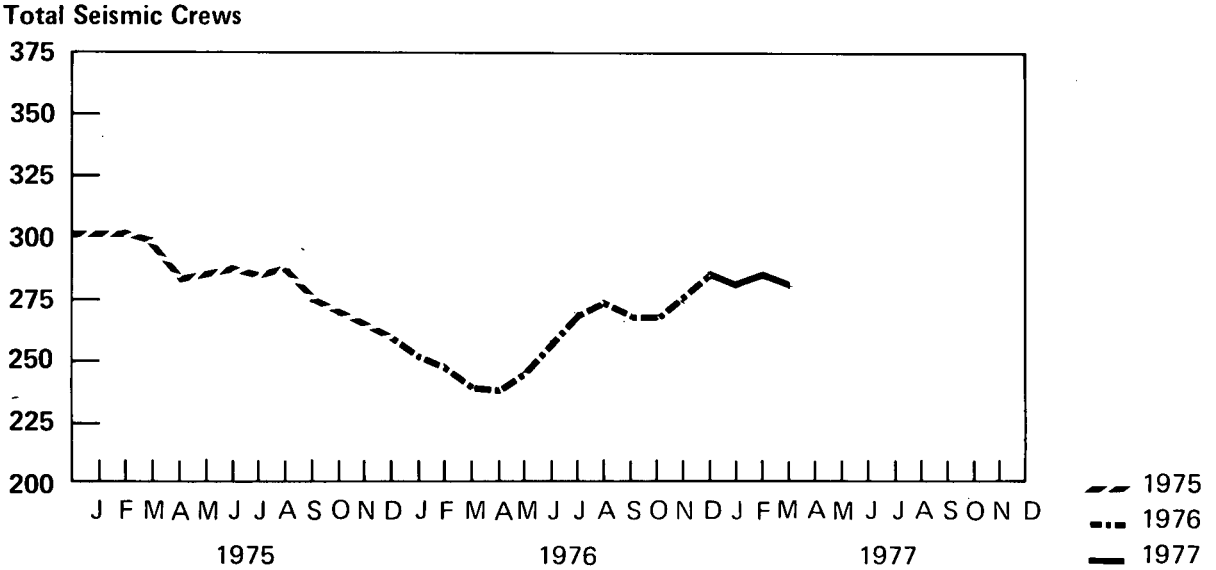


Oil and Gas Exploration and Development (Continued)

		Crews Engaged in Seismic Exploration			Line Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore	Onshore	Total
		Monthly average			Monthly average		
1972	**Year**	**12**	**239**	**251**	**10,306**	**9,333**	**19,639**
1973	**Year**	**23**	**227**	**250**	**21,579**	**10,597**	**32,175**
1974	**Year**	**31**	**274**	**305**	**28,482**	**13,219**	**41,701**
1975	**Year**	**30**	**254**	**284**	**25,773**	**12,558**	**38,331**
1976	**Year**	***24**	***237**	***261**	**NA**	**NA**	**NA**
1975	January	27	274	301			
	February	24	278	302			
	March	23	276	299			
	April	23	260	283			
	May	32	254	286			
	June	38	251	289			
	July	37	249	286			
	August	40	249	289			
	September	40	234	274			
	October	29	241	270			
	November	27	238	265			
	December	26	233	259			
1976	January	20	232	252			
	February	17	232	249			
	March	18	222	240			
	April	17	221	238			
	May	21	226	247			
	June	29	229	258			
	July	30	240	270			
	August	33	242	275			
	September	28	240	268			
	October	21	246	267			
	November	25	250	275			
	December	27	259	286			
1977	January	26	254	280			
	February	27	259	286			
	March	22	260	282			
	AVERAGE (3 months)	**25**	**258**	**283**			

*Preliminary.
NA=Not available.
Source: Society of Exploration Geophysicists.

Total Seismic Crews



Motor Gasoline

The national average selling price for regular gasoline at full service retail outlets advanced by 0.6 cent in March to 61.3 cents per gallon. The average price that full service retailers paid for regular gasoline rose by a slightly larger amount (0.7 cent) to 53.5 cents per gallon, decreasing the dealer margin by 0.1 cent to 7.8 cents per gallon. Self service retail prices for regular gasoline increased 0.6 cent in March to 57.7 cents per gallon.

The average selling price of premium gasoline at full service retail outlets increased in March by 0.7 cent to 66.8 cents per gallon. The retail price of unleaded gasoline at full service outlets was 65.4 cents per gallon, up 0.4 cent. Effective February 1, 1977, refiners were allowed pricing flexibility among the various grades of gasoline. This accounts for the variations in the price increases.

Diesel Fuel

The average selling price for diesel fuel sold at truckstops rose 0.7 cent in March to 56.0 cents per gallon. This increase was only half the amount of the increase in February.

Diesel fuel prices at service stations also showed a smaller monthly increase in March (0.8 cent in March versus 1.3 cents in February). Prices averaged 56.4 cents per gallon for the month.

Heating Oil

The national average price for heating oil sold to residential customers was 45.3 cents per gallon in February, an increase of 0.9 cent over the price in January, and an increase of 5.2 cents compared with the price in February 1976.

Residual Fuel

The average No. 6 residual fuel retail price for February was up 34 cents from January to $13.66 per barrel. This brings the total increase since May 1976, the last month residual fuel was subject to price controls, to $2.71 per barrel.

Crude Oil

The preliminary average refiner acquisition cost of domestic crude oil in February was $9.18 per barrel, 5 cents below the revised January price.

The preliminary average price refiners paid for imported crude oil was $14.50 per barrel in February, 39 cents above the revised January figure. This increase continues to reflect the OPEC price increases effective January 1.

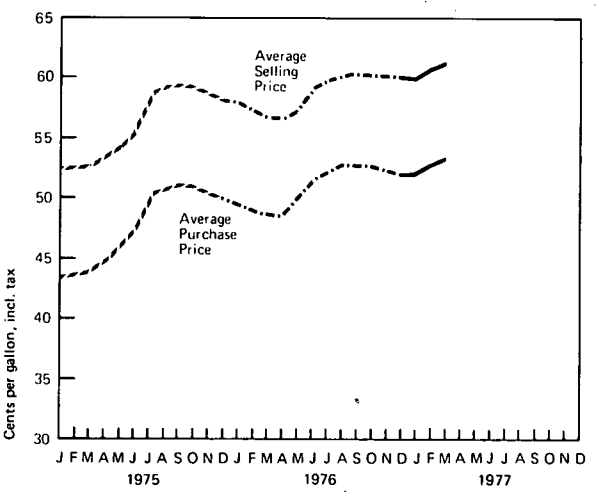
The preliminary average composite cost of crude oil purchased by refiners advanced 16 cents per barrel in February to $11.80 per barrel.

Motor Gasoline

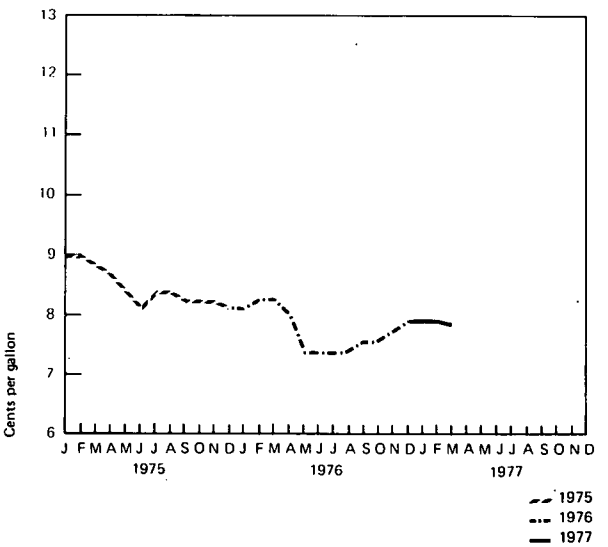
Regular Gasoline at Full Service Retail Outlets

		Average Selling Price	Average Purchase Price	Average Dealer Margin
		Cents per gallon, including tax*		
1974	**AVERAGE**	**52.8**	**43.1**	
1975	January	52.4	43.4	9.0
	February	52.5	43.5	9.0
	March	52.6	43.8	8.8
	April	53.5	44.9	8.6
	May	54.3	46.0	8.3
	June	55.6	47.5	8.1
	July	58.7	50.3	8.4
	August	59.2	50.8	8.4
	September	59.3	51.1	8.2
	October	58.9	50.7	8.2
	November	58.4	50.2	8.2
	December	58.0	49.9	8.1
	AVERAGE	**56.2**	**47.8**	
1976	January	57.7	49.6	8.1
	February	57.1	48.8	8.3
	March	56.6	48.3	8.3
	April	56.6	48.6	8.0
	May	57.4	50.0	7.4
	June	59.0	51.6	7.4
	July	59.6	52.2	7.4
	August	60.1	52.7	7.4
	September	60.2	52.6	7.6
	October	60.2	52.6	7.6
	November	60.0	52.2	7.8
	December	59.9	52.0	7.9
	AVERAGE	**58.7**	**51.0**	
1977	January	59.9	52.0	7.9
	February	60.7	52.8	7.9
	March	61.3	53.5	7.8

Average Retail Prices For Regular



Average Margins For Regular



*To derive prices excluding taxes, 12.2 cents per gallon may be deducted for 1974 and 1975, and 12.5 may be de- for 1976 and 1977.
Sources: FEA for 1974; Lundberg Survey, Inc., for January 1975 forward.

Regular Gasoline at Self Service Retail Outlets

		Average Selling Price	Average Dealer Margin
		Cents per gallon, including tax	
1975	November	55.4	5.5
	December	54.9	5.3
1976	January	54.7	5.4
	February	53.8	5.4
	March	53.2	5.3
	April	53.2	4.9
	May	54.4	4.5
	June	56.3	4.8
	July	56.6	4.6
	August	56.7	4.4
	September	56.5	4.3
	October	56.5	4.4
	November	56.4	4.5
	December	56.1	4.5
1977	January	56.2	4.5
	February	57.1	4.4
	March	57.7	4.4

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

Average Selling Prices for Premium and Unleaded Gasoline at Full Service Retail Outlets

		Premium	Unleaded (Regular)
		Cents per gallon, including tax	
1975	January	57.1	NA
	February	57.3	56.1
	March	57.5	56.2
	April	58.2	57.1
	May	59.0	57.9
	June	60.3	58.8
	July	63.1	61.5
	August	63.6	62.0
	September	63.8	62.1
	October	63.4	62.1
	November	63.2	62.0
	December	62.9	61.4
1976	January	62.7	61.2
	February	62.1	60.6
	March	61.6	60.1
	April	61.6	60.4
	May	62.4	61.1
	June	63.9	62.9
	July	64.6	63.2
	August	65.2	63.9
	September	65.3	64.0
	October	65.2	64.0
	November	65.2	63.9
	December	65.0	63.9
1977	January	65.2	64.0
	February	66.1	65.0
	March	66.8	65.4

NA=Not available.
Source: Lundberg Survey, Inc.

Average Selling Prices and Margins for Major and Independent Retail Dealers – March 1977

Regular Gasoline–Full Service

Cents per gallon, including tax

	Selling Price	Margin
Major	62.2	8.2
Independent	56.8	6.2
National Average	**61.3**	**7.8**

Regular Gasoline–Self Service

	Selling Price	Margin
Major	58.5	4.2
Independent	55.7	4.8
National Average	**57.7**	**4.4**

Premium Gasoline–Selling Prices

	Full Service	Self Service
Major	67.6	64.4
Independent	61.6	60.4
National Average	**66.8**	**63.3**

Unleaded Gasoline–Full Service Selling Prices

	Regular	Premium
Major	66.1	70.7
Independent	60.1	NA
National Average	**65.4**	**70.7**

NA=Not available.
Source: Lundberg Survey, Inc.

Average Regional Selling Prices and Dealer Margins for Regular Gasoline at Full Service Outlets – March 1977

Region	Selling Price	Margin
	Cents per gallon, including tax	
1A New England	59.8	6.0
1B Mid-Atlantic	62.4	7.1
1C Lower Atlantic	61.4	8.0
2 Mid-Continent	61.1	7.4
3 Gulf Coast	58.9	9.3
4 Rocky Mountain	62.2	9.7
5 West Coast	63.3	8.1
National Average	**61.3**	**7.8**

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

Retail Gasoline Price Changes for 21 Leading Refiners During March 1977 and Entitlement Position* During February

Company	Effective Date of Change	Amount of Change	Entitlement Position (February)
		Cents per gallon	
Amerada Hess	March 21	1.00 (retail operations) 0.85 (all others)	Seller
American Petrofina	March 9	1.00 (PAD I, II, IV, V, all grades) 2.00 (PAD III, all grades)	Buyer
	March 12	-1.00 (PAD III, all grades)	
Ashland	March 8	0.80 (all grades)	Seller
	March 15	0.30 (all grades)	
Atlantic Richfield	March 1	0.25 (PAD V, premium) 0.35 (all PADS, unleaded)	Buyer
B.P.	March 11	0.50 (PAD I, all grades)	Seller
	March 20	1.00 (PAD II, all grades)	
Cities Service	March 15	1.00 (PAD I, II, leaded, unleaded) 1.00 (PADII, leaded, unleaded)	Buyer
Champlin	March 5	1.50 (PAD I, regular, unleaded)	
	March 11	1.20 PAD III, regular, unleaded)	
	March 22	0.70 (PAD II, IV, all grades)	
Continental		None	Buyer
Exxon	March 26	-0.50 (PAD V, all grades)	Buyer
Getty	March 7	0.50 (PAD II, III, IV, regular, premium, unleaded)	Buyer
	March 19	1.00 (PAD II, III, IV, regular, premium, unleaded)	
	March 24	0.50 (PAD I, regular, premium, unleaded)	
Gulf	March 2	1.00 (PAD I, II, III, IV, leaded)	Buyer
	March 12	0.50 (PAD I, III, IV, V, 91 octane-unleaded)	
Kerr McGee	March 1	1.00 (PAD III, regular) 1.25 (PAD III, unleaded) 1.25 (PAD III, premium) 0.50 (PAD II, regular) 1.25 (PAD II, unleaded) 1.25 (PAD II, premium)	Seller
	March 7	0.50 (PAD II, regular)	
Mobil	March 10	0.80 (PAD I, all grades) 0.50 (PAD IV, V, all grades) 1.00 (PAD II, III, all grades)	Buyer
Phillips	March 12	1.00 (all PADS, except Colorado)	Buyer
Shell	March 2	1.00 (PAD I)	Buyer
	March 19	1.00 (PAD II)	
	March 30	1.00 (PAD I, III)	
Standard of California	March 10	1.00 (PAD I)	Seller
Standard of Indiana	March 3	1.00 (PAD IV, V, leaded premium, leaded regular, unleaded regular)	Buyer
	March 17	1.00 (PAD I, II, III, leaded, premium leaded regular, unleaded regular)	
Standard of Ohio	March 11	0.50 (PAD I, all grades)	Seller
	March 20	1.00 (PAD II, all grades)	
Sun	March 9	1.00 (PAD I, II, III, all grades)	Buyer
Texaco	March 18	1.00 (PAD I, II, all grades)	Buyer
Union Oil of California	March 1	1.00 (PAD I, II, III, unleaded regular) 1.00 (PAD I, II, III, premium) 0.50 (PAD IV, V, leaded regular, unleaded regular) 0.80 (PAD IV, V, premium)	Buyer

*See Definitions.
Source: FEA.

Jobber Prices for Regular Gasoline Sold by 21 Leading Refiners

		Northeast	Mid-Atlantic	Southeast	Central	Western	Southwest	Pacific	National Average
		Cents per gallon, excluding tax							
1974	**AVERAGE**								**26.7**
1975	January	27.8	27.8	27.4	28.2	28.5	27.2	27.8	27.8
	February	28.4	28.2	27.8	28.7	28.3	27.6	27.5	28.1
	March	28.9	28.8	28.4	29.1	29.0	27.8	28.0	28.6
	April	29.6	29.9	29.4	30.4	29.8	29.2	29.8	29.7
	May	30.9	31.0	30.5	31.6	31.2	30.4	31.0	30.9
	June	32.4	32.5	32.0	33.1	32.6	31.6	32.6	32.4
	July	34.4	34.6	33.9	34.9	34.5	33.4	33.7	34.2
	August	35.3	35.1	34.6	35.6	35.2	34.1	34.5	34.9
	September	35.2	35.1	34.5	35.4	35.0	34.1	34.5	34.8
	October	34.3	34.6	34.0	34.9	34.3	33.8	34.2	34.3
	November	34.1	34.3	33.9	34.6	34.3	33.6	34.0	34.1
	December	33.7	34.1	33.6	34.3	33.8	33.3	33.7	33.8
	AVERAGE								**32.0**
1976	January	33.3	33.9	33.2	34.0	33.2	33.1	33.5	33.5
	February	33.0	33.4	32.6	33.8	32.6	32.9	33.5	33.1
	March	32.4	33.0	31.8	33.4	32.5	32.6	33.2	32.7
	April	33.0	33.5	32.3	33.9	33.2	33.2	33.2	33.2
	May	34.4	34.9	33.6	35.3	34.8	34.8	34.7	34.6
	June	35.7	35.9	34.8	36.5	36.1	35.9	35.5	35.8
	July	36.1	36.3	35.4	36.8	36.3	36.3	36.3	36.2
	August	36.5	36.6	35.7	37.3	36.4	36.5	36.7	36.5
	September	35.8	36.1	35.3	36.9	35.9	36.6	36.5	36.2
	October	35.7	35.8	35.2	36.7	35.9	36.4	36.5	36.0
	November	34.9	35.1	34.4	36.3	35.3	36.3	36.5	35.6
	December	34.9	35.1	34.4	36.3	35.3	36.3	36.5	35.6
	AVERAGE								**35.0**
1977	January	35.6	35.8	35.2	36.9	35.9	36.7	37.0	36.2
	February	36.2	36.5	35.8	37.5	36.7	37.5	38.1	36.9
	March	37.0	37.3	36.7	38.2	37.0	38.0	38.1	37.5

Source: FEA.

Diesel Fuel

Average Selling Prices and Margins for No. 2 Diesel Fuel*

		Selling Price		Margin	
		Truckstops	Service Stations	Truckstops	Service Stations
		Cents per gallon, including tax			
1975	January	NA	50.6	NA	6.8
	February	49.7	50.2	7.0	7.3
	March	50.1	50.2	7.5	7.4
	April	50.5	50.6	7.4	7.5
	May	50.3	51.0	7.0	7.7
	June	51.4	51.4	7.5	7.9
	July	51.2	52.4	7.3	8.2
	August	52.1	52.6	8.1	8.9
	September	52.1	52.7	7.4	8.7
	October	51.8	53.0	6.2	7.7
	November	52.0	53.0	5.3	6.5
	December	51.7	52.4	5.3	6.7
1976	January	52.0	52.5	5.6	7.2
	February	52.1	52.0	6.0	7.3
	March	51.4	52.4	5.6	7.1
	April	51.1	52.8	5.8	7.8
	May	51.4	52.9	6.9	7.8
	June	52.0	53.3	7.0	7.7
	July	52.1	53.1	6.4	7.1
	August	52.3	53.2	6.0	7.0
	September	52.2	53.1	5.7	6.8
	October	52.4	53.1	5.8	6.5
	November	52.9	53.3	6.1	6.4
	December	53.1	53.5	5.7	5.9
1977	January	53.9	54.3	4.9	5.3
	February	55.3	55.6	5.5	5.9
	March	56.0	56.4	5.7	6.2

*See Explanatory Note 13.
NA=Not available.
Source: Lundberg Survey, Inc.

Average Selling Prices and Margins for Major and Independent No. 2 Diesel Fuel Retail Dealers – March 1977

Cents per gallon, including tax

Truckstops

	Selling Price	Margin
Major	56.7	5.0
Independent	54.8	6.2
National Average	**56.0**	**5.7**

Service Stations

	Selling Price	Margin
Major	57.7	5.8
Independent	55.2	6.5
National Average	**56.4**	**6.2**

Source: Lundberg Survey, Inc.

No. 1 Diesel Fuel

		Wholesale	**Retail**
		Cents per gallon, excluding tax	
1975	July	30.1	37.7
	August	30.8	38.2
	September	31.5	36.9
	October	33.1	35.4
	November	33.3	35.0
	December	34.2	35.5
1976	January	33.8	37.1
	February	33.6	35.3
	March	33.9	34.8
	April	34.2	35.4
	May	34.5	37.5
	June	34.7	37.9
	July	35.0	38.1
	August	35.9	38.2
	September	35.3	37.7
	October	36.3	36.4
	November	35.7	36.9
	December	R35.5	36.7
1977	January *	37.1	36.6

*Preliminary.
R=Revised data.
Note: Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and commercial accounts. Retail refers to the price at which company-owned and -operated retail dealers sell to consumers.
Source: FEA.

Heating Oil

Residential Heating Oil Prices

		Average Selling Price*	Average Purchase Price*	Average Dealer Margin*
		Cents per gallon, including taxes		
1974	**AVERAGE**	**34.7**	**26.9**	
1975	January	37.4	29.1	8.3
	February	37.0	28.7	8.3
	March	36.6	28.4	8.2
	April	36.1	29.3	6.8
	May	36.7	30.0	6.7
	June	37.1	30.3	6.8
	July	37.2	30.6	6.6
	August	38.0	31.2	6.8
	September	38.4	31.0	7.4
	October	39.3	31.8	7.5
	November	39.4	32.1	7.3
	December	40.1	32.4	7.7
	AVERAGE	**37.7**	**31.2**	
1976	January	40.1	32.4	7.7
	February	40.1	32.4	7.7
	March	39.4	NA	NA
	April	39.0	NA	NA
	May	39.0	NA	NA
	June	39.3	NA	NA
	July	39.3	NA	NA
	August	39.8	NA	NA
	September	40.2	NA	NA
	October	40.7	NA	NA
	November	41.9	NA	NA
	December	43.0	NA	NA
1977	January	44.4	NA	NA
	February	45.3	NA	NA

*Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.
NA=Not available.

Source: 1974 through February 1976—FEA No. 2 heating oil monthly price adjustment report; June 1976 forward—FEA No. 2 heating oil supply/price monitoring report.

Residential Heating Oil Prices by Region

		New England	Mid-Atlantic	Southeast	East North Central	East South Central	West North Central	West South Central	Mountain	West Coast
		Cents per gallon, including tax								
1975	January	40.2	38.9	36.5	33.2	34.7	34.0	NA	37.5	38.0
	February	39.2	38.4	36.8	33.4	34.7	33.3	NA	36.6	37.7
	March	38.0	37.8	36.4	34.2	33.2	34.3	NA	NA	36.8
	April	37.4	36.8	36.8	33.2	33.7	34.5	NA	38.9	36.8
	May	37.6	36.9	36.4	35.1	34.7	35.4	NA	37.0	37.8
	June	37.7	37.7	36.4	35.8	NA	35.9	NA	37.6	37.6
	July	37.9	36.9	36.9	36.4	34.7	36.8	NA	NA	38.8
	August	38.8	38.2	37.9	36.3	35.7	36.3	NA	41.3	39.3
	September	39.4	38.7	37.6	36.5	35.7	36.8	NA	38.9	40.1
	October	40.3	39.9	38.3	37.4	36.6	37.9	NA	39.0	41.0
	November	41.0	39.6	38.7	37.9	NA	38.1	NA	40.2	41.3
	December	41.0	41.1	39.0	38.5	34.1	38.0	NA	44.8	40.9
1976	January	41.5	40.0	39.6	38.3	37.8	38.2	35.0	41.2	41.6
	February	41.4	40.3	39.4	38.0	37.7	38.3	34.4	41.0	42.1
	March	41.5	39.8	39.2	37.0	36.7	37.6	34.5	40.4	41.9
	April	41.2	40.0	38.9	37.1	35.9	37.3	34.6	40.3	40.8
	May	41.1	39.7	38.2	37.1	35.6	37.3	34.0	40.4	42.1
	June	40.9	41.1	39.1	37.7	37.2	37.3	34.3	40.3	42.8
	July	40.7	39.8	39.1	37.9	36.9	37.3	34.4	40.1	45.0
	August	41.5	40.3	39.5	38.2	37.2	37.7	34.3	39.7	44.7
	September	41.9	40.8	37.5	38.3	38.0	38.8	34.8	41.1	46.0
	October	42.3	41.4	40.4	39.0	38.5	38.7	35.1	42.1	46.0
	November	43.3	42.4	42.1	40.1	39.8	39.5	36.3	42.8	46.5
	December	44.4	43.6	42.9	41.5	41.0	41.9	36.3	42.7	43.8
1977	January	45.8	44.9	44.2	43.2	43.1	43.0	36.9	43.4	44.6
	February	46.6	45.8	45.7	43.9	43.4	44.0	38.8	44.2	45.2

NA=Not available.
Note: Data for West South Central Region are based on a sample of less than four reporting firms.
Sources: January through December 1975—FEA No. 2 heating oil monthly price adjustment report; January 1976 forward—FEA No. 2 heating oil supply/price monitoring report.

Average Distributor Purchase Prices for Heating Oil by Region

		New England	Mid-Atlantic	Southeast	East North Central	East South Central	West North Central	West South Central	Mountain	West Coast
						Cents per gallon				
1975	January	30.3	29.7	28.5	27.2	28.8	27.5	NA	28.5	29.7
	February	29.6	29.3	28.6	27.2	28.8	27.3	NA	29.4	28.5
	March	29.5	29.3	29.1	28.1	26.8	28.1	NA	NA	27.6
	April	29.4	29.5	29.7	28.3	27.8	29.5	NA	29.0	28.5
	May	30.5	30.0	30.0	30.0	28.8	29.4	NA	30.9	28.7
	June	30.4	30.2	30.6	30.5	NA	30.7	NA	31.8	29.0
	July	30.7	30.1	29.9	31.6	28.8	31.4	NA	NA	30.4
	August	31.6	30.8	30.9	31.2	29.8	30.2	NA	31.6	32.8
	September	31.4	30.9	30.7	30.6	29.8	30.6	NA	31.9	31.4
	October	32.0	31.9	31.3	31.5	31.1	31.4	NA	34.4	32.5
	November	32.5	31.7	32.0	32.1	NA	32.0	NA	34.1	32.3
	December	32.9	32.7	31.8	32.0	29.4	31.4	NA	33.9	32.8
1976	January	32.5	32.5	31.9	32.3	NA	32.3	NA	33.6	32.9
	February	32.8	32.9	31.6	31.9	31.3	32.1	NA	NA	31.1

NA=Not available.
Source: FEA No. 2 heating oil monthly price adjustment report.

Residual Fuel Oil

RESIDUAL FUEL OIL
(Dollars per barrel)

		NO. 5		NO. 6								BUNKER "C"		TOTAL
				0.0 to 0.3 percent sulfur		0.31 to 1.0 percent sulfur		Greater than 1.0 percent sulfur		Total				
		Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	
1975	July	10.19	11.28	11.57	12.86	10.90	12.05	10.25	10.59	10.66	11.70	7.88	10.54	11.27
	August	10.19	11.04	11.53	13.22	10.85	12.34	9.72	10.53	10.49	11.89	8.76	10.43	11.32
	September	10.58	11.07	11.75	12.94	10.63	11.65	9.87	10.52	10.48	11.52	8.93	10.29	11.09
	October	10.15	11.12	11.50	12.98	10.37	12.09	9.75	10.38	10.30	11.69	8.88	10.31	11.13
	November	10.90	11.27	12.21	12.96	10.33	12.03	9.90	10.34	10.47	11.68	9.01	10.43	11.24
	December	10.83	11.64	11.89	12.87	10.37	11.83	9.65	10.06	10.24	11.42	9.07	10.15	10.97
1976	January	11.08	11.63	12.13	12.39	10.62	11.61	9.58	10.23	10.53	11.35	8.75	10.35	11.02
	February	10.55	11.57	12.42	12.78	10.87	11.84	9.70	10.35	10.73	11.52	8.53	10.27	11.15
	March	10.41	11.89	12.36	12.81	11.05	11.80	9.56	10.21	10.74	11.43	8.59	10.35	11.12
	April	R10.21	11.58	11.44	12.34	10.86	11.77	9.53	10.28	10.38	11.43	8.66	10.12	11.02
	May	9.87	11.49	11.71	11.87	10.80	11.40	9.47	9.89	10.11	10.95	8.75	10.65	10.63
	June	9.91	11.23	11.71	R12.24	R10.33	11.36	9.73	10.03	10.12	11.04	8.57	10.10	10.70
	July	10.06	11.70	11.71	12.12	10.22	11.36	9.83	10.04	10.25	11.04	9.23	10.34	10.74
	August	9.78	11.48	11.67	12.79	10.45	11.46	9.61	10.22	10.20	11.20	8.93	9.98	R10.82
	September	10.36	11.37	11.75	12.50	10.33	11.55	10.04	10.28	10.35	11.30	9.22	10.05	10.91
	October	10.25	11.64	11.86	12.94	11.04	12.12	10.00	10.73	10.75	11.82	9.57	10.81	R11.43
	November	10.84	12.04	12.33	13.15	11.62	12.21	10.40	10.98	11.16	11.95	10.31	10.83	11.61
	December	R11.49	R12.64	R13.16	R13.32	R11.74	12.76	11.04	11.48	11.87	12.44	9.95	R11.24	11.94
	January	12.34	13.39	14.06	14.34	12.74	13.68	11.51	12.32	12.43	13.32	10.34	11.89	12.94
	February*	12.27	13.66	14.00	14.52	12.85	14.07	12.05	12.74	12.59	13.66	10.23	12.00	13.20

*Preliminary.
R=Revised data.
Note: Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, institutional, commercial, and residential accounts.
Source: FEA mandatory survey of refiners and large resellers.

Aviation Fuels

AVIATION FUELS
(Cents per gallon)

		Aviation Gasoline		Naphtha-Type*	Kerosene-Type	
		Wholesale	Retail	Retail	Wholesale	Retail
1975	July	40.6	40.6	31.4	29.8	29.2
	August	41.3	42.1	30.8	32.1	29.5
	September	41.2	39.9	30.3	31.5	29.6
	October	41.1	41.2	30.2	31.7	30.0
	November	39.7	42.1	30.6	31.6	30.2
	December	40.9	40.9	30.7	31.9	30.5
1976	January	41.4	41.2	31.0	30.6	31.3
	February	41.2	42.0	31.1	31.1	31.2
	March	41.1	41.9	30.9	31.2	30.7
	April	41.2	42.5	30.5	31.9	30.5
	May	42.1	43.1	30.6	33.0	30.2
	June	42.6	42.3	31.5	32.1	30.3
	July	43.6	44.2	31.3	32.9	30.8
	August	43.7	44.1	31.7	32.1	31.1
	September	43.6	44.7	32.1	32.5	31.4
	October	43.6	43.8	32.4	33.5	31.9
	November	43.4	43.9	R32.7	33.4	32.4
	December	43.5	43.7	R32.7	34.7	32.2
1977	January	43.4	44.1	33.4	34.6	33.2
	February**	44.7	45.0	34.0	37.1	34.1

*Nearly all naphtha-type fuels are sold directly to the Defense Fuel Supply Center. Consequently, wholesale prices are not applicable.
**Preliminary.
R=Revised data.
Note: Wholesale refers to the price of aviation fuel sold to refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation fuel distributors. Retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts.
Source: FEA mandatory survey of refiners and large resellers.

Crude Oil

Domestic Crude Petroleum Prices at the Wellhead*

		Old	New	Domestic Average
		Dollars per barrel		
1974	**AVG.**	**5.03**	**10.13**	**6.87**
1975	January	5.05	11.28	7.61
	February	5.03	11.39	7.47
	March	5.03	11.47	7.57
	April	5.03	11.64	7.55
	May	5.03	11.69	7.52
	June	5.03	11.73	7.49
	July	5.03	12.30	7.75
	August	5.03	12.38	7.73
	September	5.04	12.46	7.75
	October	5.03	12.73	7.83
	November	5.03	12.89	7.80
	December	5.03	12.95	7.93
	AVG.	**5.03**	**12.03**	**7.67**
1976	January	5.02	12.99	8.63

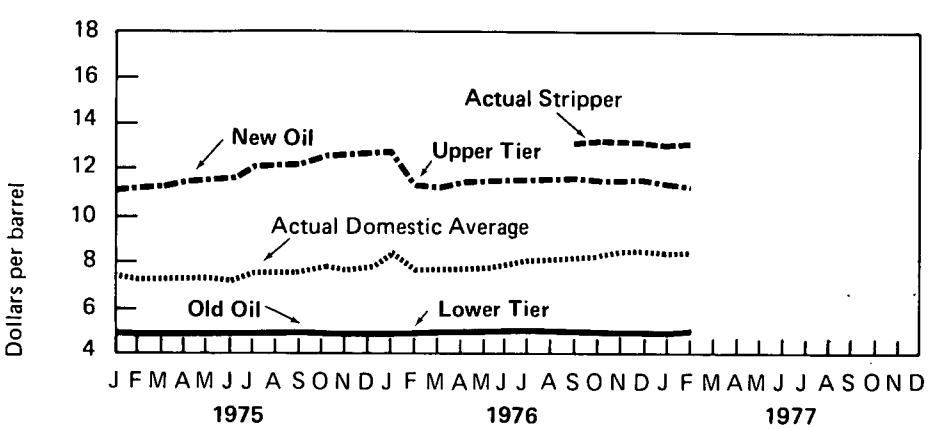
(Table continued in next column)

		Lower Tier**	Upper Tier**	Domestic Average
		Dollars per barrel		
1976	February	5.05	11.47	7.87
	March	5.07	11.39	7.79
	April	5.07	11.52	7.86
	May	5.13	11.55	7.89
	June	5.15	11.60	7.99
	July	5.19	11.59	8.04
	August	5.18	11.62	8.03

		Lower Tier**	Upper Tier**	Actual Stripper†	Actual Domestic Average††	Imputed Domestic Average††
				Dollars per barrel		
	September	5.17	11.65	13.21	8.39	8.19
	October	5.15	11.62	13.35	8.46	8.23
	November	5.17	11.62	13.31	8.62	8.40
	December	5.17	11.64	13.30	8.62	8.40
1977	January	5.17	R11.44	13.27	8.50	8.28
	February***	5.18	11.38	13.32	8.57	8.32

*See Explanatory Note 14.
**See Definitions.
***Preliminary figure based on early reports.
†Stripper oil was exempt from price controls beginning September 1, 1976. From February through August 1976, stripper oil was subject to upper tier price ceilings.
††The actual domestic average price represents the average price at which all domestic crude oil is purchased. The imputed domestic average price is the average price used to establish ceiling prices for domestic crude oil in accordance with the provisions of the Energy Conservation and Production Act. It is calculated as the weighted average of lower tier, upper tier, and an imputed stripper crude oil price. The imputed stripper crude oil price is equal to $11.63 per barrel plus the difference between the composite price of crude oil in August 1976 (excluding stripper oil) and the composite price of crude oil in the month of measurement (excluding stripper oil).
Sources: 1974 through January 1976—FEA Crude Petroleum Production Monthly Report; February 1976 forward—FEA Domestic Crude Oil Purchasers Report.

Crude Oil Wellhead Price



Percentages of Domestic Production Sold at the Wellhead

		Old Oil	New Oil	Released	Stripper
1975	January*	58	19	10	12
	February*	61	17	9	12
	March	60	18	10	12
	April	61	17	9	12
	May	62	17	8	13
	June	63	16	8	13
	July	62	16	8	14
	August	63	16	7	14
	September*	63	15	7	14
	October	63	16	7	14
	November	64	15	7	14
	December	63	16	7	14
	AVERAGE	**62**	**16**	**8**	**13**
1976	January	54	21	10	15
		Lower Tier	**Upper Tier**		
	February	56	30	–	14
	March	57	29	–	14
	April	57	29	–	14
	May	57	29	–	14
	June	56	29	–	15
	July	56	30	–	14
	August	56	30	–	14
		Lower Tier	**Upper Tier**		**Stripper**
	September**	53	34		13
	October**	53	35		13
	November**	50	37		13
	December**	50	36		14
1977	January**	51	37		13

*Totals do not add to 100 due to rounding.
**Preliminary.
Sources: January 1975 through January 1976—FEA Crude Petroleum Production Monthly Report; February 1976 forward—FEA Domestic Crude Oil Purchasers Report for Lower Tier percentages, FEA estimates for Upper Tier and Stripper percentages.

Crude Oil (Continued)

		Entitlement Price* (Dollars)	National Old Oil Supply Ratio*	Crude Oil Entitlement Benefit* (Dollars)
1974	November	5.00	.411	2.06
	December	5.00	.400	2.00
1975	January	6.00	.352	2.11
	February	6.75	.373	2.52
	March	7.31	.359	2.62
	April	7.29	.390	2.84
	May	7.39	.383	2.83
	June	7.82	.360	2.82
	July	8.13	.354	2.88
	August	8.31	.352	2.93
	September	8.31	.355	2.95
	October	8.62	.356	3.07
	November	8.94	.343	3.07
	December	8.55	.363	3.10
1976	January	8.09	.309	2.50
			National Domestic Crude Oil Supply Ratio	
1976	February	7.85	.352	2.76
	March	7.89	.358	2.82
	April	7.85	.356	2.79
	May	7.82	.356	2.78
	June	7.91	.328	2.59
	July	7.80	.314	2.45
	August	8.02	.319	2.56
	September	7.80	.296	2.31
	October	7.84	.293	2.30
	November	7.90	.273	2.16
	December	7.97	.263	2.10
1977	January	8.30	.266	2.21
	February	8.53	.267	2.28

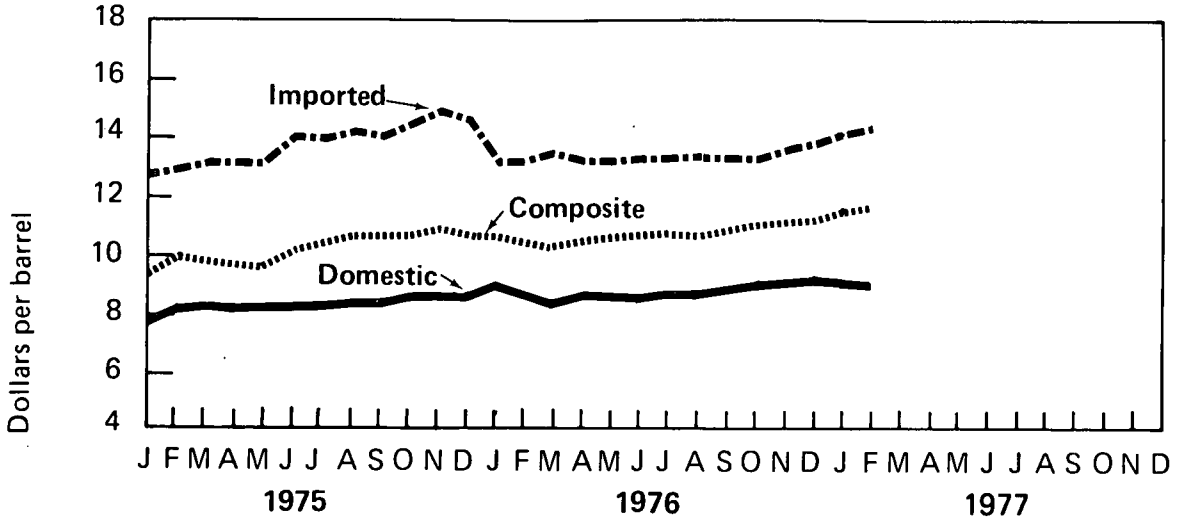
*See Definitions.
Source: FEA.

Refiner Acquisition Cost of Crude Petroleum*

		Domestic	Imported	Composite
		Dollars per barrel		
1974	**AVERAGE**	**7.18**	**12.52**	**9.07**
1975	January	7.78	12.77	9.48
	February	8.29	13.05	10.09
	March	8.38	13.28	9.91
	April	8.23	13.26	9.83
	May	8.33	13.27	9.79
	June	8.33	14.15	10.33
	July	8.37	14.03	10.57
	August	8.48	14.25	10.81
	September	8.49	14.04	10.79
	October	8.68	14.66	10.85
	November	8.67	15.04	11.05
	December	8.66	14.81	10.98
	AVERAGE	**8.39**	**13.93**	**10.38**
1976	January	9.14	13.27	10.76
	February	8.67	13.26	10.54
	March	8.48	13.51	10.44
	April	8.66	13.39	10.63
	May	8.62	13.41	10.66
	June	8.60	13.48	10.88
	July	8.72	13.51	10.97
	August	8.65	13.58	10.78
	September	8.95	13.47	11.08
	October	9.13	13.49	11.20
	November	9.23	13.58	11.26
	December	9.25	13.71	11.32
	AVERAGE	**8.84**	**13.48**	**10.89**
1977	January	R9.23	R14.11	11.64
	February**	9.18	14.50	11.80

*See Explanatory Note 15.
**Preliminary data.
R=Revised data.
Source: 1974 through January 1976—FEA Monthly Cost Allocation Report; February 1976 forward—FEA Refiners' Monthly Cost Allocation Report.

Crude Oil Refiner Acquisition Cost



Crude Oil (Continued)

Estimated Landed Cost of Imported Crude Petroleum From Selected Countries*

		Algeria	Canada	Indonesia	Iran	Nigeria	Saudi Arabia	U.A. Emirates	Venezuela
					Dollars per barrel				
1975	January	12.72	12.43	13.30	12.11	12.07	12.07	13.14	11.37
	February	12.11	12.15	13.52	11.86	12.18	11.94	12.67	11.56
	March	12.46	12.79	13.94	12.08	12.56	11.78	13.40	11.66
	April	12.36	12.95	13.71	12.34	12.46	12.16	12.55	11.61
	May	12.41	12.08	13.71	11.93	12.34	12.27	13.29	11.54
	June	12.37	11.90	13.73	12.51	12.49	11.93	12.48	11.51
	July	12.69	12.15	13.98	11.83	12.37	12.08	12.78	11.46
	August	12.68	12.27	13.85	12.17	12.32	12.10	12.60	11.44
	September	12.52	12.63	13.75	11.97	12.42	12.17	12.49	11.42
	October	13.45	13.02	14.00	12.27	13.18	12.64	12.85	12.08
	November	13.28	14.00	13.81	12.47	13.37	12.58	13.23	12.38
	December	13.46	13.96	13.92	13.01	13.57	12.93	13.21	12.31
1976	January	13.56	12.95	13.89	13.01	13.61	13.18	13.50	11.60
	February	13.57	13.24	13.94	12.87	13.52	13.21	13.36	12.09
	March	13.83	13.30	13.94	12.77	13.62	13.18	13.37	11.71
	April	13.73	13.61	13.78	12.91	13.60	13.11	13.18	11.95
	May	13.47	13.62	13.84	12.82	13.62	13.05	13.39	11.61
	June	13.75	14.19	13.84	13.00	13.78	13.14	13.09	11.55
	July	13.77	13.79	13.80	12.76	13.81	13.02	13.45	11.44
	August	13.91	13.78	13.78	13.09	13.87	13.03	13.23	11.77
	September	14.03	13.70	13.80	12.78	13.82	12.87	13.44	11.98
	October	13.81	13.71	13.84	12.73	13.99	12.87	13.22	11.84
	November	13.84	13.59	13.77	12.58	13.95	13.01	13.18	12.01
	December	14.14	13.52	13.75	12.69	14.11	13.02	13.29	12.19
1977	January	14.80	13.92	14.42	13.16	14.97	13.22	13.56	13.29
	February	15.18	13.74	14.57	13.56	15.12	13.32	13.46	13.76

*See Explanatory Note 16.
Source: FEA.

Unrecouped Costs for Refined Products for 30 Largest Refiners

		Distillate*	Motor Gasoline	Aviation Jet Fuel**	Other Products	Total
				Millions of dollars		
1975	January	254	431	–	672	1,357
	February	300	418	–	790	1,508
	March	282	452	–	966	1,700
	April	302	485	–	807	1,594
	May	292	370	–	771	1,433
	June	284	266	–	785	1,334
	July	233	219	–	624	1,075
	August	280	344	–	583	1,208
	September	347	335	–	661	1,342
	October	338	245	–	673	1,255
	November	426	275	–	796	1,497
	December	446	211	–	826	1,483
1976	January	336	242	131	515	1,224
	February	279	336	145	456	1,216
	March	263	316	163	456	1,198
	April	237	398	180	524	1,339
	May	264	632	161	446	1,503
	June	–	628	135	349	1,112
	July	–	587	129	384	1,100
	August	–	679	125	352	1,156
	September	–	619	134	340	1,093
	October	–	733	151	372	1,256
	November	–	796	168	368	1,332
	December	–	723	139	317	1,179
1977	January	–	R901	R166	R325	R1,392
	February***	–	1,038	187	303	1,528

*Includes No. 2 heating oil and No. 2 diesel fuel only. After May 1976, reporting of the distillate bank is no longer required due to decontrol of middle distillates.
**Prior to January 1976 refiners were not required to maintain separate banks for aviation jet fuel.
***Preliminary.
R=Revised data.
Source: FEA.

Natural Gas

Natural Gas Prices Reported by Major Interstate Pipeline Companies

		PURCHASES			SALES		
		From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users*	To Resellers**	Total Sales
		Cents per thousand cubic feet					
1975	January	30.4	104.0	35.8	67.8	70.9	71.2
	February	29.5	105.9	35.2	70.1	74.0	74.3
	March	R33.5	102.5	38.8	70.4	77.7	77.8
	April	32.8	102.8	38.3	71.1	82.3	81.9
	May	34.7	100.6	39.8	71.1	83.7	82.8
	June	35.3	98.9	40.2	72.2	85.1	83.9
	July	36.7	101.1	41.7	73.9	84.6	83.6
	August	35.5	141.0	43.3	73.4	86.5	85.1
	September	36.5	141.1	44.4	72.8	85.9	84.7
	October	36.0	140.1	44.3	77.2	85.9	85.4
	November	36.5	162.5	46.7	77.8	86.9	86.6
	December	35.9	161.8	46.0	81.1	79.6	80.1
1976	January	38.6	164.0	48.6	87.5	88.7	89.2
	February	39.5	165.3	49.5	87.7	92.3	92.7
	March	39.5	164.5	49.7	86.4	89.8	90.2
	April	40.6	164.3	51.2	88.6	100.2	99.7
	May	42.4	165.1	52.5	86.9	98.3	97.6
	June	43.7	166.6	53.7	89.5	98.2	98.5
	July	43.6	168.4	53.2	94.3	101.8	101.1
	August	56.4	167.7	65.3	97.8	104.8	104.1
	September	68.5	183.7	77.7	103.5	92.5	94.1
	October	57.4	190.1	68.8	106.4	105.4	105.7
	November	52.6	182.4	63.3	112.9	106.1	106.9

*Represents direct sales by pipeline companies to industrial users. Does not include sales to industrial users by resellers.
**Includes the cost of gas to the distributing utility at entrance of distribution system or point of receipt.
R=Revised.
Source: Federal Power Commission.

Intrastate Natural Gas Prices for Selected States by Type of Contract*

	California		Kansas		Louisiana		Oklahoma		Texas	
	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended
	Cents per thousand cubic feet									
1975										
January	75.00	76.89	55.30	–	98.04	102.96	95.99	76.03	139.90	164.04
February	–	–	–	–	128.68	113.06	97.30	64.49	154.72	163.11
March	–	–	–	–	115.78	125.89	107.70	55.05	96.66	97.50
April	–	–	64.65	45.24	149.78	134.81	132.58	87.79	160.09	176.32
May	–	–	–	–	126.80	123.53	129.31	106.56	156.72	158.59
June	–	53.68	65.00	–	130.91	129.57	94.22	120.29	165.00	187.54
July	–	65.51	–	–	117.22	125.63	133.87	114.62	183.22	178.22
August	–	75.00	198.24	–	132.87	114.20	136.77	121.21	151.87	132.50
September	–	86.00	152.89	70.38	121.89	141.23	143.73	106.69	169.87	180.77
October	135.53	–	–	–	75.16	117.60	143.09	144.14	168.10	187.30
November	–	–	157.95	139.02	138.42	71.65	140.61	133.15	149.43	182.17
December	–	–	–	80.00	139.64	131.92	132.50	153.86	187.20	140.90
1976										
January	–	83.97	103.81	84.54	138.75	131.23	149.87	109.39	181.05	193.31
February	–	40.00	–	109.68	125.00	145.30	133.72	146.71	176.63	191.54
March	–	–	150.36	–	145.66	155.39	162.83	168.57	178.70	176.44
April	195.00	–	150.00	–	142.99	154.05	162.12	148.30	202.60	152.95
May	122.00	60.39	180.39	149.84	125.54	106.05	156.35	164.02	154.00	197.22
June	–	–	114.45	150.82	147.11	137.67	169.56	168.14	178.01	192.98
July	–	117.15	137.57	150.83	127.55	141.71	148.20	95.00	151.19	176.23
August	–	97.38	–	–	138.70	164.23	151.81	171.49	157.98	198.81
September	–	–	–	125.68	164.10	156.39	164.85	172.00	184.07	197.66
October	–	–	–	111.72	144.64	149.91	163.48	161.16	196.58	188.80
November	–	–	150.82	144.21	–	131.91	162.57	90.73	186.80	182.82
December	–	97.47	160.73	–	194.51	152.45	167.55	175.98	198.71	202.54

*Prices are for FPC jurisdictional natural gas companies selling more than 1 billion cubic feet per year in interstate commerce.
Source: Federal Power Commission - Summary of Intrastate Natural Gas Prices.

Average Retail Prices for Natural Gas Sold to Residential Customers for Heating Use

		Cents per thousand cubic feet
1975	January	141.2
	February	144.7
	March	146.1
	April	150.6
	May	153.7
	June	155.7
	July	154.7
	August	155.4
	September	159.4
	October	160.6
	November	166.2
	December	170.2
1976	January	171.4
	February	175.2
	March	177.0
	April	178.4
	May	180.8
	June	183.2
	July	184.5
	August	185.8
	September	191.2
	October	195.0
	November	198.3
	December	208.3
	AVERAGE	**185.8**
1977	January	213.8
	February	217.0
	March	219.9

Source: Bureau of Labor Statistics.

Utility Fossil Fuels

U.S. Average Delivered Prices of Coal at Utilities

		Contract	Spot
		Dollars per short ton	
1975	January	14.57	28.12
	February	15.71	25.93
	March	15.68	25.02
	April	15.88	24.52
	May	16.45	23.78
	June	16.40	23.36
	July	16.06	22.35
	August	16.65	22.39
	September	16.76	22.46
	October	16.72	22.52
	November	16.79	22.50
	December	16.90	22.40
1976	January	16.53	21.75
	February	17.04	21.23
	March	17.65	21.36
	April	17.76	21.43
	May	18.12	21.17
	June	18.05	20.88
	July	17.93	21.00
	August	18.19	21.35
	September	18.55	21.46
	October	18.49	21.28
	November	18.26	21.56

Source: Federal Power Commission.

Utility Fossil Fuels (Continued)

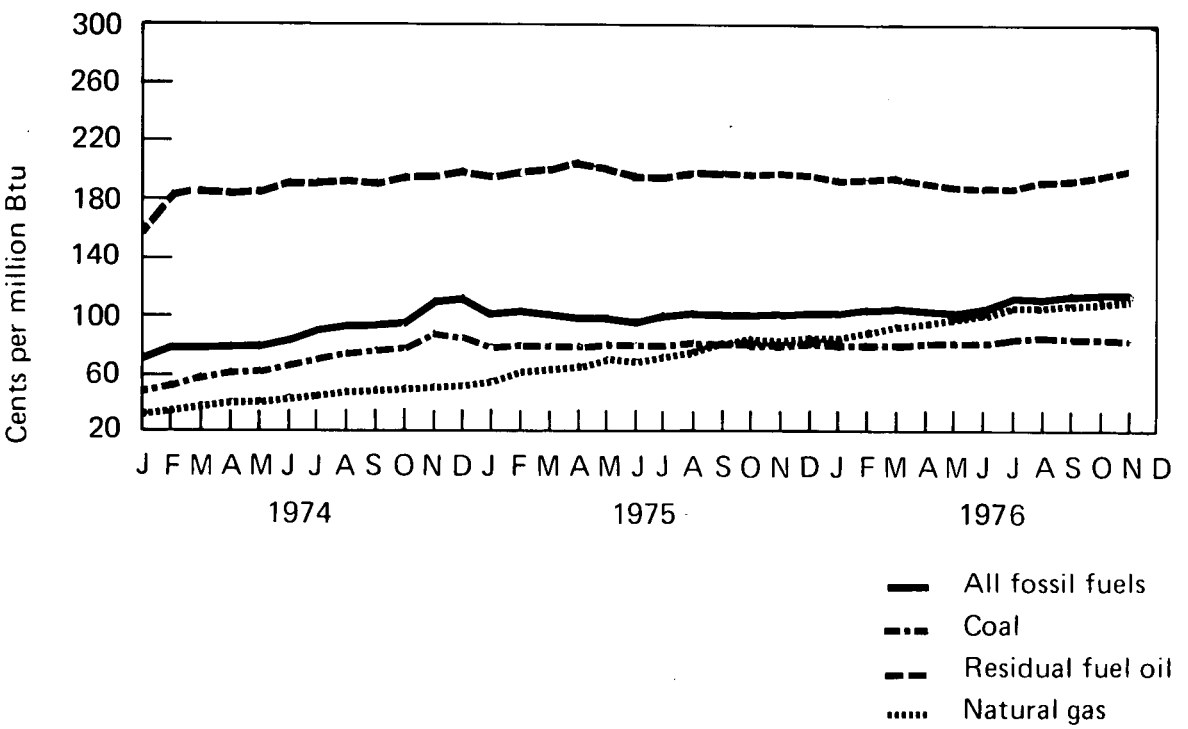
COST OF FOSSIL FUELS DELIVERED TO STEAM ELECTRIC UTILITY PLANTS

All Fossil Fuels*

Region	1975		1976										
	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV
	Cents per million Btu												
New England	181.2	177.6	181.3	184.6	182.3	184.3	174.6	174.2	172.4	173.7	176.6	184.0	186.9
Middle Atlantic	140.8	140.8	143.6	142.2	136.8	136.9	136.6	137.9	144.5	140.2	135.2	136.8	139.8
East North Central	89.5	92.6	89.9	90.0	88.3	91.3	92.1	93.8	100.9	97.6	95.2	95.8	96.8
West North Central	62.5	65.7	72.7	67.4	67.5	67.2	68.9	69.1	70.8	75.1	76.1	73.5	76.1
South Atlantic	117.0	121.3	122.0	122.7	118.3	119.2	120.0	118.9	130.7	126.2	125.6	127.2	129.1
East South Central	84.5	85.5	88.5	88.0	87.4	90.4	90.9	90.0	93.2	94.6	94.4	93.8	92.3
West South Central	77.0	82.8	88.0	88.2	91.7	93.5	94.6	98.6	101.2	102.9	102.4	101.6	106.2
Mountain	52.3	55.6	50.4	48.3	58.4	56.1	50.1	53.0	55.4	57.9	55.3	55.4	54.2
Pacific	206.6	222.7	214.0	206.5	211.3	196.2	180.3	177.2	180.2	195.7	195.9	199.1	214.5
NATIONAL AVG.	**102.4**	**106.9**	**107.3**	**107.6**	**107.8**	**106.4**	**105.8**	**107.0**	**113.2**	**112.9**	**110.7**	**111.1**	**115.2**

*See Explanatory Note 17.

National Average



Coal

Region	1975 NOV	1975 DEC	1976 JAN	1976 FEB	1976 MAR	1976 APR	1976 MAY	1976 JUNE	1976 JULY	1976 AUG	1976 SEPT	1976 OCT	1976 NOV
						Cents per million Btu							
New England	127.6	120.8	124.2	122.7	119.4	124.8	127.0	122.3	127.9	127.8	125.4	125.6	125.6
Middle Atlantic	106.1	104.0	102.8	103.4	101.7	100.2	101.7	102.5	107.5	103.3	102.6	102.6	100.2
East North Central	83.8	85.7	83.1	83.1	82.7	85.0	86.8	86.6	92.4	90.9	89.8	89.2	90.2
West North Central	60.6	58.2	59.2	60.2	62.3	64.1	65.8	64.7	65.3	70.1	71.0	69.3	69.6
South Atlantic	98.5	100.1	98.3	99.2	99.7	100.8	100.8	100.7	104.4	103.5	103.4	105.4	103.8
East South Central	82.3	81.9	83.9	83.5	82.6	83.4	85.1	84.5	85.5	85.7	87.2	88.3	87.4
West South Central	24.0	24.0	26.4	26.4	26.4	26.4	26.4	27.3	32.4	36.4	42.4	43.7	51.5
Mountain	33.5	36.1	34.1	33.0	42.4	34.6	32.2	35.9	35.3	36.8	36.2	38.2	39.1
Pacific	59.5	58.9	72.7	76.0	74.5	75.5	75.7	75.2	75.8	75.7	75.7	76.0	75.6
NATIONAL AVG.	**81.7**	**82.2**	**80.2**	**81.4**	**83.3**	**83.7**	**84.6**	**84.6**	**85.7**	**86.4**	**86.9**	**86.9**	**86.6**

Residual Fuel Oil*

Region	1975 NOV	1975 DEC	1976 JAN	1976 FEB	1976 MAR	1976 APR	1976 MAY	1976 JUNE	1976 JULY	1976 AUG	1976 SEPT	1976 OCT	1976 NOV
						Cents per million Btu							
New England	184.8	181.0	182.5	185.4	183.5	185.7	170.0	177.8	175.4	182.8	179.5	188.1	192.0
Middle Atlantic	191.5	191.6	191.3	179.9	191.8	197.1	190.3	187.3	184.3	189.3	190.0	199.5	200.5
East North Central	211.4	192.4	197.0	193.4	200.9	198.4	202.8	211.8	214.8	222.8	221.4	225.8	223.9
West North Central	161.6	157.1	173.1	162.2	153.4	153.0	145.6	148.8	151.3	148.4	149.6	156.8	167.9
South Atlantic	179.8	173.0	174.6	177.5	178.6	179.6	171.3	171.9	174.1	176.6	180.4	184.1	189.2
East South Central	180.4	171.4	172.8	173.7	174.3	176.0	170.9	166.9	171.0	171.3	163.8	166.6	167.8
West South Central	189.2	187.9	195.3	190.7	183.0	187.4	182.0	176.4	173.3	178.6	166.4	176.6	180.3
Mountain	196.8	202.3	206.8	203.5	205.0	220.8	206.4	212.4	217.2	224.8	213.0	221.9	209.3
Pacific	261.9	259.7	246.6	240.7	240.3	232.7	229.2	229.1	228.7	228.8	230.2	231.2	234.1
NATIONAL AVG.	**200.5**	**198.1**	**194.1**	**195.4**	**197.7**	**196.7**	**188.1**	**187.4**	**187.0**	**191.8**	**109.8**	**198.8**	**203.5**

Natural Gas**

Region	1975 NOV	1975 DEC	1976 JAN	1976 FEB	1976 MAR	1976 APR	1976 MAY	1976 JUNE	1976 JULY	1976 AUG	1976 SEPT	1976 OCT	1976 NOV
						Cents per million Btu							
New England	133.8	157.7	166.1	166.1	151.6	134.5	144.0	153.7	154.1	153.9	154.4	155.4	185.2
Middle Atlantic	103.1	105.0	107.8	195.8	106.3	150.3	111.5	108.0	114.8	114.5	122.7	125.2	111.9
East North Central	128.3	136.8	126.8	124.4	125.0	127.7	135.3	139.8	138.2	147.8	148.4	153.0	168.8
West North Central	55.8	55.9	56.1	61.6	61.5	68.0	73.4	78.1	78.4	81.4	81.9	80.8	84.1
South Atlantic	78.5	80.8	75.1	82.0	75.5	78.2	84.0	83.1	88.7	82.9	88.3	89.3	89.1
East South Central	120.2	146.6	156.6	157.4	147.5	148.0	128.6	123.0	136.9	132.5	137.7	158.5	162.2
West South Central	77.6	80.3	83.5	87.3	90.8	92.3	94.0	98.1	100.4	101.6	101.8	101.0	106.6
Mountain	86.2	90.4	86.2	85.5	87.4	90.4	87.4	89.5	90.8	101.7	104.3	112.2	118.2
Pacific	136.9	151.1	141.2	151.6	149.5	152.6	147.3	147.6	146.6	155.3	166.5	169.0	177.5
NATIONAL AVG.	**83.5**	**86.1**	**86.5**	**92.1**	**94.9**	**97.4**	**100.8**	**104.4**	**106.2**	**106.5**	**191.9**	**109.9**	**113.1**

*See Explanatory Note 17.
**Includes small quantities of coke oven gas, refinery gas, and blast furnace gas.
Source: Federal Power Commission.

Petroleum Consumption

Extremely cold weather prevailed over many of the populous areas of the Northern Hemisphere in January and February 1977, resulting in higher petroleum consumption by some of the major industrial countries. Canada registered the greatest increase of 7.3 percent compared with January-February 1976 consumption; Japan was second with a 6.2-percent rise. Consumption in Germany increased only 0.3 percent. Three other countries reported consumption decreases compared with the first 2 months of last year—France, down 2.1 percent; the United Kingdom, down 2.0 percent; and Italy, down 1.6 percent.

Crude Oil Production

OPEC production rose 3.2 million barrels per day in February to 32.0 million barrels per day, recouping part of January's production loss of over 5 million barrels per day. Major increases were reported for Kuwait, Iran, and Saudi Arabia. OPEC production in February 1976 was 28.0 million barrels per day, 14.0 percent below the current month's figure.

Total world petroleum production in February was estimated at 59.3 million barrels per day, 9.0 percent higher than it was last year at the same time.

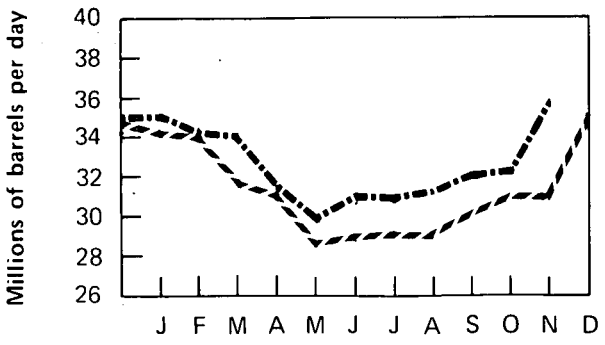
Petroleum Consumption

Petroleum Consumption for Major Free World Industrialized Countries

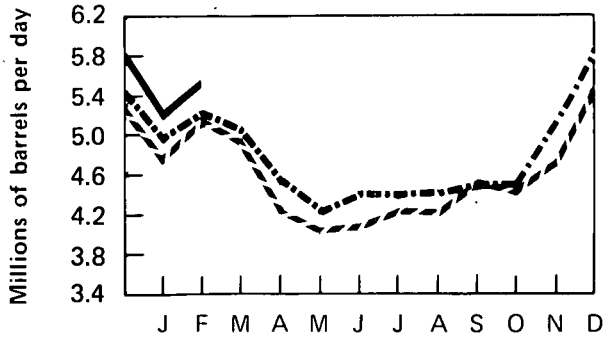
		Total IEA*	Japan**	West Germany	France***	United Kingdom	Canada	Italy†	Other IEA††
					Thousands of barrels per day				
1973	**AVG.**	**33,600**	**5,000**	**2,693**	**2,219**	**1,974**	**1,597**	**1,525**	**3,467**
1974	**AVG.**	**32,390**	**4,872**	**2,408**	**2,094**	**1,857**	**1,630**	**1,521**	**3,449**
1975	Jan	34,100	4,729	2,183	2,190	1,981	1,691	1,792	3,741
	Feb	34,100	5,191	2,455	2,243	1,907	1,872	1,767	3,825
	Mar	31,600	4,918	2,234	1,952	1,731	1,558	1,558	3,285
	Apr	31,200	4,202	2,431	2,202	1,826	1,592	1,530	3,578
	May	28,600	4,041	2,253	1,640	1,482	1,474	1,174	3,058
	June	29,300	4,135	2,106	1,642	1,416	1,550	1,289	3,195
	July	29,400	4,265	2,319	1,491	1,322	1,537	1,234	2,961
	Aug	29,200	4,234	2,360	1,300	1,208	1,444	1,105	3,082
	Sept	30,400	4,543	2,309	1,785	1,501	1,474	1,465	3,338
	Oct	31,000	4,409	2,328	1,917	1,707	1,555	1,679	2,981
	Nov	31,000	4,747	2,361	2,077	1,723	1,577	1,448	3,423
	Dec	35,100	5,447	2,502	2,658	1,821	1,880	1,600	3,863
	AVG.	**31,235**	**4,568**	**2,319**	**1,925**	**1,633**	**1,594**	**1,468**	**3,382**
1976	Jan	35,100	R4,941	2,459	2,432	1,679	1,784	1,748	3,943
	Feb	34,400	5,246	2,490	2,492	1,865	1,754	1,713	3,991
	Mar	34,300	5,165	2,742	2,372	1,879	1,747	1,621	3,907
	Apr	31,500	4,526	2,332	2,117	1,716	1,518	1,409	3,457
	May	29,900	4,218	2,314	1,796	1,418	1,509	1,238	3,226
	June	31,300	4,429	2,388	1,604	1,417	1,560	1,208	3,459
	July	31,100	4,416	2,624	1,624	1,346	1,531	1,247	3,323
	Aug	31,100	R4,461	2,514	1,668	1,272	1,577	1,273	3,395
	Sept	32,200	R4,517	2,521	1,966	1,478	1,515	1,562	3,806
	Oct	32,300	R4,523	2,391	1,908	R1,544	1,560	1,450	3,780
	Nov	35,900	5,160	2,700	2,206	R1,749	1,822	1,390	4,233
	Dec	NA	5,846	2,571	2,672	1,859	1,996	1,749	NA
	AVG.	**32,634**	**4,786**	**2,504**	**2,073**	**1,600**	**1,656**	**1,467**	**3,681**
1977	Jan	NA	5,252	2,375	2,487	1,647	1,914	1,630	NA
	Feb	NA	5,576	2,600	2,324	1,830	1,882	1,783	NA
	AVG. (Year to date)	**NA**	**5,406**	**2,482**	**2,410**	**1,734**	**1,899**	**1,703**	**NA**

*The 19 signatory nations of the International Energy Agency (IEA) are: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Except for the United States, inland consumption excludes bunkers, refinery fuel, and losses.
**Excludes liquefied petroleum gases and condensates.
***Not a member of IEA.
†Principal products only.
††Excludes the United States.
NA=Not available.
R=Revised data.
Note: All Total IEA, Other IEA, and recent figures are estimates.
Source: Central Intelligence Agency.

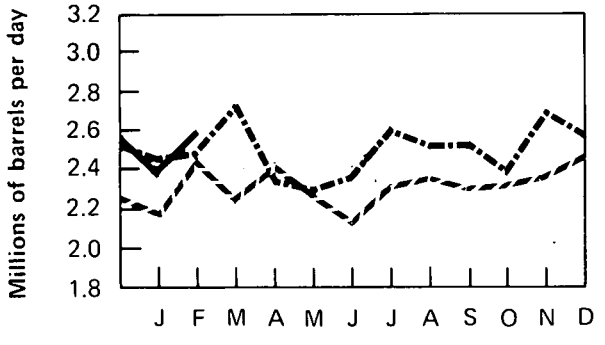
Total IEA



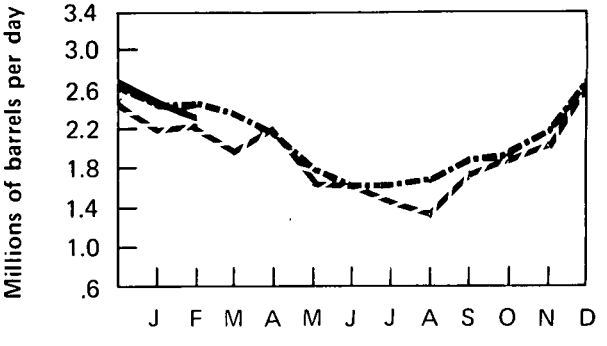
Japan*



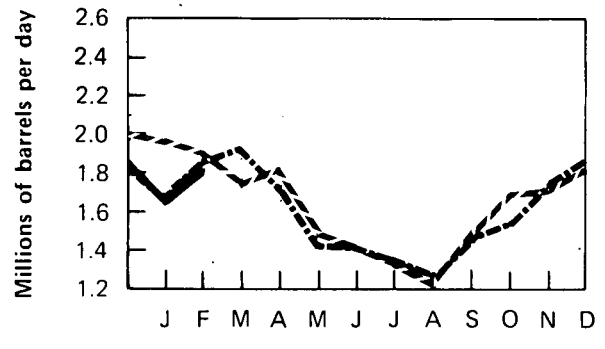
West Germany



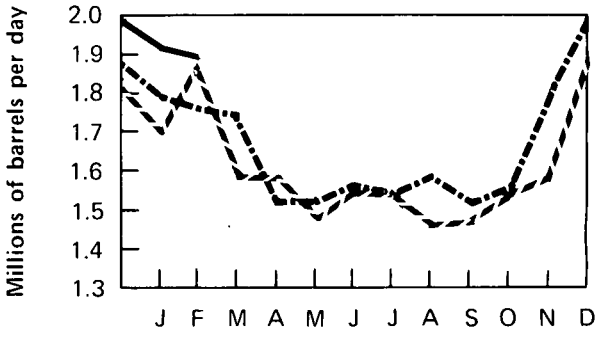
France**



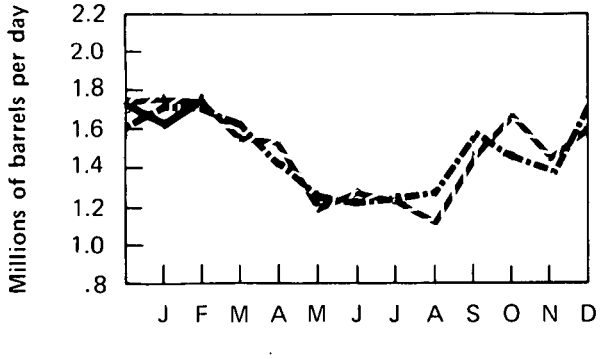
United Kingdom



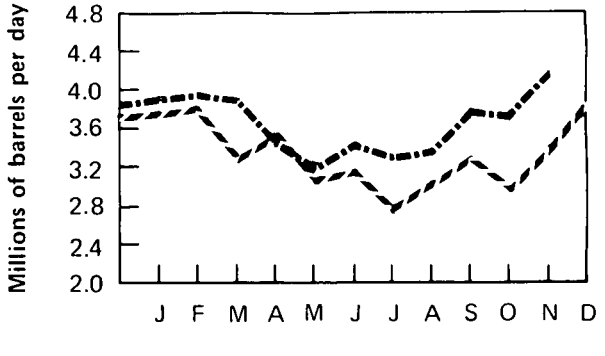
Canada



Italy***



Other IEA†



*Excludes liquefied petroleum gases and condensates.
**Not a member of IEA.
***Principal products only.
†Excludes the United States.

1975
1976
1977

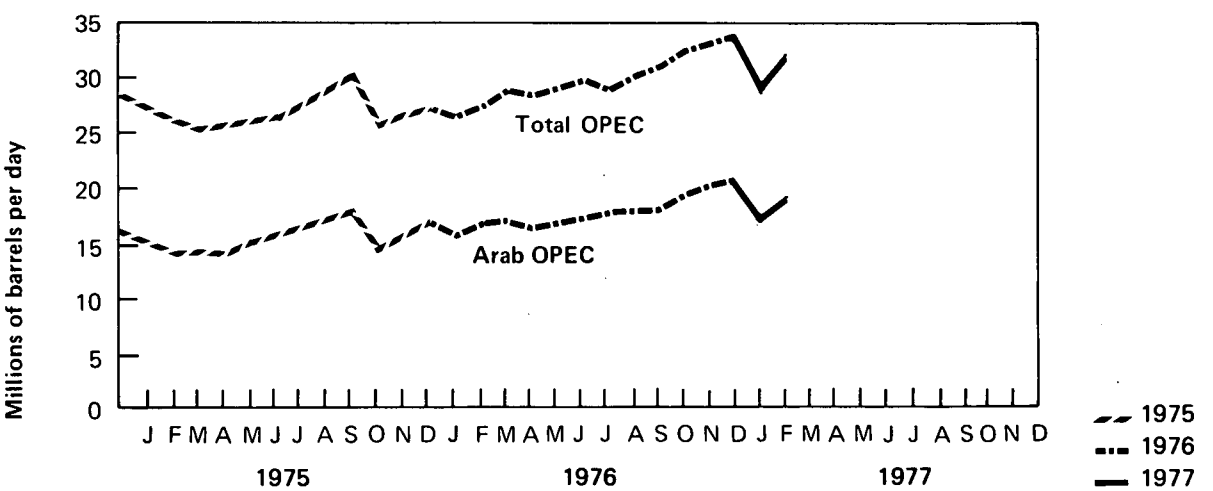
Crude Oil Production

Crude Oil Production for Major Petroleum Exporting Countries – February 1977

Country	Production						Production Capacity	Production Shut in
	1972 Year	1973 Year	1974 Year	1975 Year	1976 Year	1977 February**	February	February
	Thousands of barrels per day							Percent
Algeria	1,040	1,070	960	960	990	1,000	1,000	0
Iraq	1,465	2,020	1,970	2,260	2,090	2,300	3,000	23.3
Kuwait*	3,283	3,020	2,545	2,085	R2,150	1,940	3,500	44.6
Libya	2,239	2,175	1,520	1,480	R1,960	2,120	2,500	15.2
Qatar	482	570	520	440	R490	440	700	37.1
Saudi Arabia*	6,016	7,595	8,480	7,075	R8,580	9,620	11,500	16.3
United Arab Emirates	1,202	1,535	1,680	1,665	R1,940	2,000	2,380	16.0
Subtotal: Arab OPEC	**15,727**	**17,985**	**17,675**	**15,965**	**R18,200**	**19,420**	**24,580**	**21.0**
Ecuador	78	210	175	160	R190	220	225	2.2
Gabon	125	150	200	225	R220	220	250	12.0
Indonesia	1,080	1,340	1,375	1,305	R1,510	1,650	1,700	2.9
Iran	5,023	5,860	6,020	5,350	R5,880	6,000	6,700	10.4
Nigeria	1,815	2,055	2,255	1,785	R2,070	2,200	2,300	4.3
Venezuela	3,219	3,365	2,975	2,345	R2,290	2,300	2,600	11.5
Subtotal: Non-Arab OPEC	**11,340**	**12,980**	**13,000**	**11,170**	**R12,160**	**12,590**	**13,775**	**8.6**
TOTAL OPEC	**27,067**	**30,965**	**30,675**	**27,135**	**R30,360**	**32,010**	**38,355**	**16.5**
Canada	1,540	1,800	1,695	1,460	R1,300	1,350	1,800	25.0
Mexico	440	465	580	720	R820	950	1,000	5.0
TOTAL OPEC, Canada, Mexico	**29,047**	**33,230**	**32,950**	**29,315**	**R32,480**	**34,310**	**41,155**	**16.6**
Total World	**50,550**	**55,745**	**55,865**	**52,990**	**R57,020**	**59,340**		

*Includes about one-half of the former Kuwait-Saudi Arabia Neutral Zone. Production in February 1977 amounted to approximately 350,000 barrels per day.
**Estimated.
R=Revised.
Source: Central Intelligence Agency and National Energy Board of Canada.

OPEC Countries Crude Oil Production



Definitions

Base Production Control Level

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold from a particular property in the same month of 1972. If domestic crude oil was not produced and sold from that property in every month of 1972, the total number of barrels of domestic crude oil produced and sold from that property in 1972, divided by 12.

2. Effective February 1, 1976: the total number of barrels of old crude oil produced and sold from the property during calendar year 1975, divided by 365, and multiplied by the number of days in the particular month during 1975. A producer may elect to use the total number of barrels of crude oil produced and sold from the property during calendar year 1972, divided by 366, and multiplied by the number of days in the particular month during 1972.

Branded Independent Marketer

A firm which is engaged in the marketing or distribution of refined petroleum products pursuant to (1) an agreement or contract with a refiner (or a firm which controls, is controlled by, or is under common control with such refiner) to use a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner (or any such firm), or (2) an agreement or contract under which any such firm engaged in the marketing or distribution of refined petroleum products is granted authority to occupy premises owned, leased, or in any way controlled by a refiner (or firm which controls, is controlled by, or is under common control with such refiner), but which is not affiliated with, controlled by, or under common control with any refiner (other than by means of a supply contract, or an agreement or contract described in parts (1) and (2) of this definition), and which does not control such refiner.

Ceiling Price

The maximum permissible selling price, prior to February 1, 1976, for a particular grade of domestic crude oil in a particular field is the May 15, 1973, posted price plus $1.35 per barrel.

Controlled Crude Oil

Crude oil that was domestically produced prior to February 1, 1976, subject to the ceiling price for crude oil. For a particular property which is not a stripper well lease, the volume of controlled oil equals the base production control level minus an amount of released oil equal to the new oil production from that property.

Crude Oil Domestic Production

Domestic crude oil production is measured at the wellhead and includes lease condensate, which is a natural gas liquid recovered from lease separators or field facilities.

Crude Oil Entitlement Value

The average value a refiner receives from the entitlement program for each incremental barrel of imported crude oil. It is calculated by multiplying the entitlement price by the National Old Oil Supply Ratio for November 1974 through January 1976 and by the National Domestic Crude Oil Supply Ratio for February 1976 forward.

Crude Oil Imports

The volume of crude oil imported into the 50 States and the District of Columbia, including imports from U.S. territories, but excluding imports of crude oil into the Hawaiian Foreign Trade Zone.

Crude Oil Input to Refineries

Total crude oil used as input for the refining process, less crude oil lost or used for refinery fuel.

Crude Oil Stocks

Stocks of crude oil and lease condensate held at refineries, pipeline terminals, and on leases.

Cumulative Deficiency

A measure of the cumulative deficit of production below the base production control level after the first month in which new oil was produced and sold from a specific property.

Dealer Tankwagon (DTW) Price

The price at which a dealer purchases gasoline from a distributor or a jobber.

Distillate Fuel Oil

The lighter fuel oils distilled off during the refining process. Included are products known as ASTM grades Nos. 1 and 2 heating oils, diesel fuels, and No. 4 fuel oil. The major uses of distillate fuel oils include heating, fuel for on- and off-highway diesel engines, and railroad diesel fuel. Minor quantities of distillate fuel oils produced and/or held as stocks at natural gas processing plants are not included in this series.

Domestic Demand for Refined Petroleum Products

A calculated value, computed as domestic production plus net imports (imports less exports), less the net in-

crease in primary stocks. It, therefore, represents the total disappearance of refined products from primary supplies.

Electricity Production

Production at electric utilities only. Does not include industrial electricity generation.

Entitlement Position

The monthly entitlement position of a refiner indicates whether he bought or sold entitlements in that month. An entitlement is the right to process "deemed old oil," which is the sum of a refiner's receipts of "old" oil and a fraction of his receipts of "upper tier" crude oil. This fraction is set monthly by FEA. A refiner must purchase entitlements for the amount of his "deemed old oil" receipts in excess of the national domestic crude oil supply ratio (NDCOSR). The NDCOSR, as calculated by FEA, reflects the differences in costs to refiners of "old" oil, "upper tier" crude oil, and imported crude oil.

Entitlement Price

The price of an entitlement, fixed by FEA, is the exact differential as reported for the month between the weighted average delivered cost per barrel to refiners of both imported crude oil and stripper crude oil, and the weighted average delivered cost per barrel to refiners of "old oil," less 21 cents.

Firm Natural Gas Service

High priority gas service in which the pipeline company is under contract to deliver a specified volume of gas to the customer on a non-interruptible basis. Residential and small commercial facilities usually fall into this category.

Interruptible Natural Gas Service

Low priority gas service in which the pipeline company has the contractual option to temporarily terminate deliveries to customers by reason of claim of firm service customers or higher priority users. Large commercial facilities, industrial users, and electric utilities usually fall into this category.

Jet Fuel

Includes both naphtha-type and kerosene-type fuels meeting standards for use in aircraft turbine engines. Although most jet fuel is used in aircraft, some is used for other purposes, such as for generating electricity in gas turbines.

Jobber

A petroleum distributor who purchases refined product from a refiner or terminal operator for the purpose of reselling to retail outlets and commercial accounts or for the purpose of retailing through his own retail outlets.

Jobber Margin

The difference between the price at which a jobber purchases refined product from a refiner or terminal operator and the price at which the jobber sells to retail outlets. This does not reflect margins obtained by jobbers through retail sales or commercial accounts.

Jobber Price

The price at which a petroleum jobber purchases refined product from a refiner or terminal operator.

Landed Cost

The cost of imported crude oil equal to actual cost of the crude oil at point of origin plus transportation cost to the United States.

Limited Work Authorization

A Limited Work Authorization (LWA) may be granted by the Atomic Safety and Licensing Board of the Nuclear Regulatory Commission to an applicant who wants to construct a nuclear powerplant providing that the project has been cleared for all requirements of the National Environmental Protection Act and that the geologic and topographic suitability of the reactor site has been found satisfactory. The LWA allows an applicant to proceed with site excavation, install temporary construction and service facilities, construct service roads, and erect structures and components not subject to normal quality assurance inspections. It may save a utility from 6 to 8 months in total construction time. However, because the ultimate approval of a construction permit is based on all evidence revealed during the licensing hearings, the successful award of an LWA is no guarantee that a construction permit will also be granted.

Line Miles of Seismic Exploration

The distance along the earth's surface that is covered by seismic traverses.

Lower Tier Crude Oil

Old crude oil.

Lower Tier Ceiling Price Determination

The lower tier ceiling price for a particular grade of domestic crude oil in a particular field is the sum of (1) the highest posted price at 6 a.m., local time, May 15, 1973, for transactions in that grade of crude oil in that field; or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and

quality in the nearest field for which prices were posted; and (2) $1.35 per barrel.

Major Brand

Lundberg Survey, Inc., defines major brand as an integrated company that produces, refines, transports, and markets in Interstate Commerce under its own brand(s) in 10 or more States.

Motor Gasoline Production

Total production of motor gasoline by refineries, measured at the refinery outlet. Relatively small quantities of motor gasoline are produced at natural gas processing plants, but these quantities are not included.

Motor Gasoline Stocks

Primary motor gasoline stocks held by gasoline producers. Stocks at natural gas processing plants are not included.

National Domestic Crude Oil Supply Ratio

Old oil receipts adjusted for upper-tier receipts, small refiner bias, and other minor adjustments, divided by crude runs to stills adjusted for residual fuel entitlements.

National Old Oil Supply Ratio

Old oil receipts, adjusted for small refiner bias and exemptions, divided by crude runs to stills adjusted for entitlements issued for imported refined products.

Natural Gas Liquids (NGL)

Products obtained from natural gasoline plants, cycling plants, and fractionators after processing the natural gas. Included are ethane, liquefied petroleum (LP) gases (propane, butane, and propane-butane mixtures), natural gasoline, plant condensate, and minor quantities of finished products such as gasoline, special naphthas, jet fuel, kerosene, and distillate fuel oil.

New Crude Oil

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the base production control for that month and less the current cumulative deficiency.

2. Effective February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the property's base production control level for that month and less the current cumulative deficiency since February 1, 1976.

Nonbranded Independent Marketer

A firm which is engaged in the marketing or distribution of refined petroleum products, but which (1) is not a refiner, (2) is not a firm which controls, is controlled by, is under common control with, or is affiliated with a refiner (other than by means of a supply contract), and (3) is not a branded independent marketer.

Old Crude Oil

1. Prior to February 1, 1976: The total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month and less the total number of barrels of released crude oil for that property in that month.

2. Effective February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month.

Power Ascension Nuclear Powerplant

A nuclear powerplant that has been licensed by the Nuclear Regulatory Commission to operate, but that is in the initial testing phase during which production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer, and places it in "commercial operation" status. A request is then submitted to the appropriate utility rate commission to include the powerplant in the rate base calculation.

Primary Stocks of Refined Petroleum Products

Stocks held at refineries, bulk terminals, and pipelines. They do not include stocks held in secondary storage facilities, such as those held by jobbers, dealers, independent marketers, and consumers.

Property

Prior to August 26, 1976, a property was defined as the right to produce domestic crude oil, which arises from a lease or from a fee interest. This definition was interpreted to apply only to a surface lease. In August 1976 the definition of a property was changed so that a producer may treat as a separate property each separate and distinct producing reservoir subject to the same right to produce crude oil, provided that such reservoir is recognized by the appropriate governmental regulatory authority as a producing formation that is separate and distinct from, and not in communication with, any other producing formation. Although this new definition was not implemented until August 26, 1976, it was made effective retroactively to February 1, 1976. (F.R. 36171, August 26, 1976)

Refined Petroleum Products Imports

Imports (into the 50 States and the District of Columbia) of motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, liquefied petroleum gases, petrochemical feedstocks, special naphtha, lubricants, waxes, asphalt, plant condensate, and unfinished oils. Included are imports of refined products for bonded and military use, and imports from U.S. territories and the Hawaiian Foreign Trade Zone.

Refiner Acquisition Cost

The cost to the refiner, including transportation and fees, of crude petroleum. The composite cost is the average of domestic and imported crude costs and represents the amount of crude cost which refiners may pass on to their customers.

Released Crude Oil

An amount of crude oil produced from a property in a particular month prior to February 1, 1976, which is equal to the total number of barrels of new crude oil produced and sold from that property in that month. The amount of released crude oil for a property in a particular month shall not exceed the base production control level for that property in that month.

Residual Fuel Oil

The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as ASTM grades Nos. 5 and 6 oil, heavy diesel oil, Navy Special Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

Rotary Rig

Machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

Separative Work Unit (SWU)

The measure of work required to produce enriched uranium from natural uranium. Enrichment plants separate natural uranium feed material into two groups, an enriched product group with a higher percentage of U-235 than the feed material and a depleted tails group with a lower percentage of U-235 than the feed material. To produce 1 kilogram of enriched uranium containing 2.8 percent U-235, and a depleted tails assay containing 0.3 percent U-235, it requires 6 kilograms of natural uranium feed and 3 kilograms of separative work units (3 SWU).

Stripper Well Property

A property whose average daily production of crude oil per well (excluding condensate recovered in nonassociated production) did not exceed 10 barrels per day during any preceding consecutive 12-month period beginning after December 31, 1972.

Synthetic Natural Gas (SNG)

A product resulting from the manufacture, conversion, or reforming of petroleum hydrocarbons which may be easily substituted for or interchanged with pipeline quality natural gas.

Uncontrolled Crude Oil

That portion of domestic crude oil production including new, released, and stripper oil which, before February 1, 1976, could be sold at a price exceeding the ceiling price.

Unrecouped Costs

Costs which have not been recovered in the current month's product prices but which have been "banked" for later use.

Upper Tier Crude Oil

Effective February 1, 1976, upper tier crude oil included new crude oil and crude oil produced from a stripper well lease. Effective September 1, 1976, upper tier crude oil includes new crude oil only.

Upper Tier Ceiling Price Determination

The upper tier ceiling price for a particular grade of domestic crude oil in a particular field is (1) the highest posted price on September 30, 1975, for transactions in that grade of crude oil in that field in September 1975, or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; less (2) $1.32 per barrel.

Well

A hole drilled for the purpose of finding or producing crude oil or natural gas or providing services related to the production of crude oil or natural gas. Wells are classified as oil wells, gas wells, dry holes, stratigraphic tests, or service wells. This is a standard definition of the American Petroleum Institute.

Explanatory Notes

1. Domestic production of energy includes production of crude oil and lease condensate, natural gas (wet), and coal (anthracite, bituminous, and lignite), as well as electricity output from hydroelectric and nuclear powerplants and industrial hydroelectric power production. The volumetric data were converted to approximate heat contents (Btu-values) of the various energy sources using conversion factors listed in the Units of Measure.

2. U.S. imports of fossil fuels include imports of crude oil, refined petroleum products, and natural gas (dry).

3. Domestic consumption of energy includes domestic demand for refined petroleum products, consumption of coal (anthracite, bituminous, and lignite) and natural gas (dry), electricity output from hydroelectric and nuclear powerplants, industrial hydroelectric power production, and net imports of electric power. Approximate heat contents (Btu-values) were derived using conversion factors listed in the Units of Measure. Electricity imports were converted using the Btu-content of hydroelectric power. 1976 and 1977 electricity imports were estimated on the basis of the import level for 1975.

4. Distillate oil heating degree-days relate demand for distillate heating fuel to outdoor air temperature. Heating degree-days are defined as deviations of the mean daily temperature at a sampling station below a base temperature equal to 65° F by convention. Numerous studies have shown that when the outside temperature is 65°, most buildings can maintain an indoor air temperature of 70° without the use of heating fuels.

Mean daily temperature information is forwarded to the National Oceanic and Atmospheric Administration, Department of Commerce, from approximately 200 weather stations around the country. These data are used to calculate statewide heating degree-day averages based on population. The population-weighted State figures are aggregated into Petroleum Administration for Defense Districts and the national average, using a weighting scheme based on each State's consumption of distillate fuel oil per degree-day (1974 data base).

5. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries. (LRG). NGL produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

6. The petroleum short-term demand forecasting model uses historical consumption data to construct a regression equation for each of eight major petroleum products. Each equation attempts to capture the relationship between final demand for that product and the factors influencing that demand. The explanatory factors used in predicting product demand include (1) macroeconomic variables such as personal income and the Federal Reserve Board Index of Manufacturing, (2) real product prices, (3) variables representing the effects of weather and other seasonal variations in demand, and (4) other factors relevant to a particular product.

The assumptions underlying the current short-term forecast are:

1. Normal weather.
2. Real GNP growth rate of 4.9 and 6.3 percent for 1977 and 1978, respectively.
3. Implementation of the Energy Policy and Conservation Act and the Energy Conservation and Production Act; specifically, the composite price of domestic crude oil is set at $7.66 per barrel beginning February 1976. This price ceiling is permitted to rise at 10 percent per year. Furthermore, stripper oil and tertiary oil are not controlled.
4. The price of imported oil is assumed to be $13.40, $13.98, and $14.73 for the years 1976, 1977, and 1978, respectively.

The supply model includes an assumed level of domestic crude oil and NGL production and inventory changes. Imports are determined as the incremental supply required to meet total demand for refined products not satisfied by domestic production or inventory drawdown.

7. Domestic consumption of natural gas includes the quantities sold to consumers plus the gas used for plant and pipeline fuel, after the natural gas liquids have been extracted. All monthly consumption data are estimated. Marketed production of natural gas includes gross withdrawals from the ground less the quantities used for repressuring and the amount vented and flared, before the natural gas liquids have been extracted.

8. The Federal Energy Administration and Federal Power Commission began the coordinated collection and compilation of monthly underground storage information from all underground storage operators in the United States in October 1975. Initial storage information reported was for the month of September 1975. Comparable monthly information for total U.S. storage operations is not available for prior periods.

The total gas in storage is the total volume of gas (base gas plus working gas) in storage reservoirs as of the end of the month. Base gas is the volume of gas, including all native gas in place at the time of conversion to storage, needed as a permanent inventory to maintain adequate reservoir pressures and deliverability rates throughout the withdrawal season. Base gas includes the volumes which will not be recoverable upon termination of storage operations. Working gas is the volume of gas above the designated base gas level available for withdrawal.

9. Bituminous coal and lignite consumption as reported by the Bureau of Mines are derived from information provided by the Federal Power Commission, Department of Commerce, and reports from selected manufacturing industries and retailers. Domestic consumption data in this series, therefore, approximate actual consumption. This is in contrast to domestic demand reported for petroleum products, which is a calculated value representing total disappearance from primary supplies.

Bituminous coal and lignite production is calculated from the number of railroad cars loaded at mines, based on the assumption that approximately 60 percent of the coal produced is transported by rail. Production data are estimated by the Bureau of Mines from Association of American Railroads reports of carloadings.

10. Quantities of uranium are measured by various units at different stages in the fuel cycle. At the mill, quantities are usually expressed as pounds or short tons of U_3O_8. After the conversion stage, the units of measure are either metric tons (MT) of UF_6 or metric tons of uranium (MTU). The latter designation expresses only the elemental uranium content of UF_6.

Following the enrichment stage, the same units are used, but the U-235 content has been enhanced at the expense of loss of material. At the fabrication stage, UF_6 is changed to UO_2, and the standard unit of measure is the MTU. We have chosen to present all uranium quantities as MTU; conversion factors to other units are given in the Units of Measure section.

11. The units used to describe power generation at nuclear plants are all based on the watt, which is a unit of power. (Power is energy produced per unit of time.) As with fossil-fueled plants, nuclear plants have three design power ratings. The thermal rating (expressed in thermal megawatts) is the rate of heat production by the reactor core. The gross electrical rating (expressed in electrical megawatts, MWe) is the generator capacity at the stated thermal rating of the plant. The net electrical rating (also expressed in MWe) is the power available as input to the electrical grid after subtracting the power needed to operate the plant. (A typical nuclear plant needs 5 percent of its generated electricity for its own operation.)

The electrical energy produced by a plant is expressed either as megawatt hours (MWhe) or kilowatt hours (KWhe). Tables in the nuclear section show generated electricity as average electrical power. This enables a more direct comparison to design capacity and to previous months' performances. To obtain the quantity of electricity generated during a given time period (in kilowatt hours), multiply the average power level (in kilowatts) by the number of hours during that period.

The energy extracted from uranium fuel is expressed as thermal megawatt days per metric ton of uranium (MWD/MTU). The production of plutonium in the fuel rods is expressed as kilograms of plutonium per metric ton of discharged uranium (kg/MTU).

12. The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. The Electric Utilities Sector is made up of privately- and publicly-owned establishments which generate electricity primarily for resale.

13. Prior to January 1975, diesel fuel prices were obtained from retail gasoline dealers that also sold diesel fuel. Beginning in January 1975, the diesel fuel survey was expanded to include selected truckstops plus additional retail gasoline dealers that sold diesel fuel. Selling price estimates are based on a survey of 31 cities. Margins are based on a survey of 10 cities.

14. Prior to February 1976, the domestic crude petroleum wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices. For the 2-year period January 1974 through January 1976, the old oil price at the wellhead was originally

estimated to be $5.25 per barrel based on representative postings. This estimate was revised in July 1976 after a survey of crude oil purchasers was implemented and more complete data became available. Estimates of the average old oil price given in the table for months prior to February 1976 are based on prices for old oil reported on new oil leases, and were not derived from a statistically valid sample of old oil leases.

15. The refiner acquisition cost of domestic crude petroleum is the price paid by refiners for domestic crude petroleum, unfinished oils, and natural gas liquids and includes transportation costs from the wellhead to the refinery. The refiner acquisition cost of imported crude petroleum is the average landed cost of imported crude petroleum to the refiner and represents the amount which may be passed on to the consumer. It incorporates transportation costs and fees (including the supplemental import fees) and any other costs incurred in purchasing and shipping crude oil to the United States.

16. The estimated landed cost of imported crude petroleum from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude petroleum from countries which export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

17. The weighted average utility fuel cost for the total United States includes distillate fuel oil delivered to utilities whereas the regional breakdown for residual fuel oil prices represents only No. 6 fuel oil prices.

Units of Measure

Weight

1 metric ton	*contains*	1.102 short tons
1 long ton	*contains*	1.120 short tons

Conversion Factors for Crude Oil

Average gravity

1 barrel	*contains*	42 gallons
1 barrel	*weighs*	0.136 metric tons (0.150 short tons)
1 metric ton	*contains*	7.33 barrels
1 short ton	*contains*	6.65 barrels

Conversion Factors for Uranium

1 short ton (U_3O_8)	*contains*	0.769 metric tons of uranium
1 short ton (UF_6)	*contains*	0.613 metric tons of uranium
1 metric ton (UF_6)	*contains*	0.676 metric tons of uranium

Approximate Heat Content of Various Fuels

Petroleum	
Crude Oil	5.800 million Btu/barrel
Refined products	
Imports, average	6.000 million Btu/barrel
Consumption, average	5.4959 million Btu/barrel
Gasoline	5.248 million Btu/barrel
Jet Fuel, average	5.604 million Btu/barrel
Naphtha-type	5.355 million Btu/barrel
Kerosene-type	5.670 million Btu/barrel
Distillate fuel oil	5.825 million Btu/barrel
Residual fuel oil	6.287 million Btu/barrel
Natural gas liquids	4.023 million Btu/barrel
Natural gas	
Wet	1,095 Btu/cubic foot
Dry	1,021 Btu/cubic foot
Coal	
Bituminous and lignite	
Production	23.50 million Btu/short ton
Consumption	22.80 million Btu/short ton
Anthracite	25.40 million Btu/short ton

Electricity Conversion Heat Rates

Fossil fuel steam-electric	
Coal	10,280 Btu/kilowatt hour
Gas	10,784 Btu/kilowatt hour
Oil	10,804 Btu/kilowatt hour
Nuclear steam-electric	10,660 Btu/kilowatt hour
Hydroelectric	10,383 Btu/kilowatt hour
Electricity Consumption	3,412 Btu/kilowatt hour

Note: The heat content conversion factors listed above were revised in the April 1977 issue to conform with the most recently published Bureau of Mines figures given in Department of the Interior news release "Annual U.S. Energy Use Up in 1976," March 14, 1977.

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